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경영학석사학위논문

**A Study on the Effect and Mechanism of  
Leader-Member Exchange Social Comparison  
(LMXSC) on Job Performance**

상대적 LMX의 질(LMXSC)이 구성원의 직무성과에  
미치는 영향과 메커니즘에 관한 연구

2016년 2월

서울대학교 대학원

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2015년 12월

서울대학교 대학원  
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## **ABSTRACT**

# **A Study on the Effect and Mechanism of Leader-Member Exchange Social Comparison (LMXSC) on Job Performance**

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Social comparison is an essential nature of human social life. Despite this nature, earlier research on leader-member exchange (LMX) has largely neglected the effect of social comparison among work group members by taking dyadic and isolated approach on LMX. To overcome such deficiency in the literature and to gain more realistic and intact picture of social exchanges between leader and member, this study investigates the effect and mechanism of Leader-Member Exchange Social Comparison (LMXSC) on employees. The recently introduced concept of LMXSC aims to measure how the focal employee perceives one's relative standing of LMX compared to those of others. A well-established theory and numerous researches on social comparison imply that socially compared LMX

may affect employee's attitudes and behaviors beyond the effect of objective LMX. Especially, this study suggests that the one who perceives the better standing in LMX than others (i.e. high LMXSC) may experience felt obligation toward the leader and enhance self-efficacy, both of which, in turn, result in better job performance; task performance and organizational citizenship behaviors (OCBs). Furthermore, previous researches suggest that individuals differ in response toward social exchange and social comparison. Based on this, we further explore when the effect of LMXSC is strengthened by proposing two possible moderators; exchange ideology and social comparison orientation.

A sample of 163 leader-member dyads working in diverse industries in South Korea was collected and analyzed for empirical testing of hypotheses. The hierarchical regression results have shown that LMXSC had a significantly positive effect on both felt obligation and self-efficacy even after controlling LMX. Employee's self-efficacy was related to supervisor-rated task performance and OCBs, whereas felt obligation was only related to OCBs. The test of mediating mechanism unveiled that the effects of LMXSC on the two types of job performance were partially mediated by self-efficacy. However, unexpectedly, the mediating role of felt obligation was not found. Lastly, as supposed, LMXSC was found to affect the employee's self-efficacy whose social comparison orientation is high rather than low. However, the moderating effect of exchange ideology between LMXSC and felt obligation was not found.

Generally, this study provides a meaningful step forward in LMX literature in

that it goes beyond a classical dyadic approach. Especially, we provided empirical evidence for the effect and underlying mechanism of LMXSC which benefits employee's job performance. In other words, our findings suggest that the perception of *better* standing in LMX obviously has more advantages than simply recognizing a *good* relationship with the leader. We expect more extensive researches on this implication to be conducted in the future. The implications and limitations of this study as well as directions for future studies are also discussed in detail.

**Key words:** LMX social comparison, social comparison, self-efficacy, felt obligation, social comparison orientation, job performance

**Student Number:** 2014-20450

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# **I . INTRODUCTION**

Over the past several decades, scholars have amassed a significant body of research on leader-member exchange (LMX). While classical leadership theories assume that leader exerts homogeneous influence on the members within work group (Graen & Uhl-Bien, 1995), LMX theory suggests the differentiated interpersonal relationships where leaders establish low-quality, transactional relationships with some and, at the same time, establish high-quality, socioemotional relationships with others (Dansereau, Graen, & Haga, 1975). A voluminous body of research has proved that employees who engage in high quality of LMX feel an obligation to reciprocate to their leaders and organizations with positive work attitudes (Erdogan & Liden, 2002; Harris, Wheeler, & Kacmar, 2009; Liden, Sparrowe, & Wayne, 1997) and better performance (Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007; Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012).

Despite these valuable findings, research on LMX to date has an important limitation in that the majority of research considered focal LMX relationships in isolation from those of coworkers (Sparrowe & Liden, 1997, 2005), ignoring the fact that that LMXs are naturally embedded within the broader social context of work groups (Hu & Liden, 2013). This deficiency in literature put forwarded the new stream of LMX research examining LMX from the perspective of social context rather than isolated, dyadic context (Henderson, Wayne, Shore, Bommer, & Tetrick, 2008; Herman, Dasborough, & Ashkanasy, 2008; Vidyarthi, Liden, Anand, Erdogan, & Ghosh, 2010).

Based on differentiation which is core tenet of LMX theory, this new research emphasizes on exploring social comparison process within group induced by

differentiation. In other words, the differential quality of LMX relationships prompt members to engage in implicit comparison that may enable focal employee to be aware of her or his relative standing in a workgroup. Therefore, an employees' evaluation of own *relative* standing of LMX relationship may shape work attitudes and behaviors in work place (Henderson et al., 2008; Hu & Liden, 2013; Vidyarthi et al., 2010). To prove the effects of relative LMXs, two useful constructs have been introduced. First, Henderson et al. (2008) termed *relative LMX* (RLMX) which means objective relative LMX standing, operationalized by subtracting the group mean of LMX from individual LMX. Following this, Vidyarthi et al. (2010) developed *LMX social comparison* (LMXSC) which refers to subjective or perceptual ratings by focal employees of their relative LMX standing. Although the concept of RLMX has been more frequently utilized by scholars (Li, Liu, Fang, & Wu, 2014; Epitropaki & Martin, 2013; Hu & Liden, 2013), LMXSC deserves more attention for several reasons. First, subjective perceptions of environment has been found to be more influential than real environment (Kristof-Brown, Zimmerman, & Johnson, 2005). That is, perceived standing (LMXSC) may act more proximal antecedent of attitudes and behaviors than the real standings (RLMX) (Vidyarthi et al., 2010; Anand, Vidyarthi, & Park, 2015). Second, especially regarding social comparison process, it is important that the perceiver may not attain or use the entire information of all LMX standings of others. Therefore, LMXSC can differ from RLMX which is driven from calculation with all LMX data in social group. In this regard, Thomas, Martin, Epitropaki, Guillaume and Lee (2013) said that LMXSC is "a more direct measure of the social comparison process as perceived through the eyes of the

beholder." Aforementioned two pioneering studies on relative LMX (both objective and subjective) have demonstrated that individuals' LMX standings among coworkers have a positive influence on their in-role and extra-role performance (i.e. organizational citizenship behavior, OCB) beyond the effect of dyadic LMX alone (Henderson et al., 2008; Vidhyarthi et al., 2010). However, the knowledge of why and when the relative LMXs shape employees' attitudes and behaviors is far less clear. Specifically, no research has been conducted to identify the underlying psychological mechanisms through which the subjective judgment of one's own LMX standing leads to positive outcomes.

Answering for the request to fill up theoretical deficiency by Hu and Liden (2013) and Vidhyarthi et al. (2010), this study mainly focuses on examining underlying mechanisms between LMXSC and job performance. We consider employees' *self-efficacy*, belief in one's capabilities to accomplish tasks (Bandura, 1982), and *felt-obligation*, belief in whether one should care about the organization (or leader)'s well-being and should help organization (or leader) reach the goals (Eisenberger, Ameli, Rexwinkel, Lynch, & Rhoades, 2001) as two primary psychological processes that convey the effect of LMXSC on individual outcomes. This dual mechanism model has unique value in LMX and LMX differentiation literature. Wang, Law, Hackett, Wang, and Chen (2005) commented that if the follower feels receiving leaders' recognition and praise, these in turn (1) nourish the follower's sense of self-worth and (2) felt obligation to reciprocate, thereby motivating behaviors that serve this obligation. However, to our knowledge, none of studies explained these two mechanism together. Some scholars

asserted that social exchange brings benefits based on the norm of reciprocity, which make workers feel obliged to exert more effort on tasks (Wayne, Shore, & Liden 1997; Wilson, Sin, & Conlon, 2010). However, this does not explain how employees can attain self-confidence and belief in themselves leading better task achievements. On the other hand, other scholars found that the better treatment from the leader increases employee's self-worth (Deci, Connel, & Ryan, 1989; Keller & Dansereau, 1995). However, this may not explain why employees need to use such increased self-belief for their leaders and organizations. In sum, each mechanism explains employee's reactions to favorable treatment by the leader, but it could be at most partial explanation. Thus, this study poses two mechanisms simultaneously suggesting that employees who feels relatively closer to the leader will show positive job performance since they likely to believe their competency(self-efficacy) in task as well as they need to reciprocate (felt obligation).

Furthermore, ignoring the boundary conditions when assessing the effects of relative LMX may provide only the narrow picture of LMXSC (Hu & Liden, 2013). Hence, we also explore the boundary conditions of employee characteristics which may moderate the effect of LMXSC. Recently, researchers have started examining how and why a certain types of employees respond with different degrees to exchange relationships in social context (Hochwarter, 2005; Kamdar & Van Dyne, 2007). Along with this line, we suggest possible moderating factors that may shape the linkages between LMXSC and job performance through self-efficacy and felt obligation.

In a nutshell, this study dedicates to uncover how and for whom the perception of relative standing of LMX plays a pivotal role in job effectiveness at work. For this, we

suggest and verify the dual underlying mechanism between LMXSC and job performance considering employee's self-efficacy and felt obligation as two mediators. Second, the individual factors that may shape the linkage between LMXSC and each mediators will be identified. Although social comparison is regarded as universal and inevitable element in social life, research that integrates social comparison with organizational phenomena has been lacking (Greenberg, Ashton-James, & Ashkanasy, 2007). Through a comprehensive approach incorporating mediators and moderators, this study will help us to draw an intact picture of social comparison that happens on a daily basis among leaders and their subordinates.

## II . THEORETICAL BACKGROUND

### 2.1. LMX and LMX Differentiation

Extant research has found that leader-member exchange (LMX), or dyadic relationship between supervisor and subordinate, has significant influence on subordinate attitudes and behaviors (Harris, Li, & Kirkman, 2014; see Ilies et al., 2007 for review). The underpinning assumption of LMX theory is that leaders develop distinctive quality of LMXs with multiple members in work groups or social groups (Liden & Graen, 1980). Yet, the majority of LMX studies has operationalized and measured LMX in absolute terms of independent dyads (supervisor-subordinate) ignoring the reality that LMX is basically embedded within broader social context of work groups. In other words, a dyadic approach has significant limitation in that it cannot capture the variability of LMXs and its effects in social group. The earlier researchers found that leaders establish differentiated exchanges with their members in 90 percent of the time (Liden & Graen, 1980). Subsequent empirical studies have also shown that differentiated LMXs predominantly exist within the team context (Erdogan & Baur, 2010; Hu & Liden, 2013).

Acknowledging such pervasiveness and potential implication of differentiating phenomenon, recent scholars have established a new approach conceptualizing *LMX differentiation*, which refers to within-group variation in the quality of LMX (Kauppila, 2015). The study of Henderson, Liden, Glibkowski and Chaudhry (2009) served as a great milestone enlarging this new stream of LMX, suggesting the model of antecedents and consequences of LMX differentiation. Concerning the outcomes of LMX differentiation, it still remains unclear whether differentiation is beneficial or detrimental

(Erdogan & Bauer, 2015). On the positive side, Liden, Erdogan, Wayne, and Sparrow (2006) found that LMX differentiation had positive effects on task performance in situation of high task interdependence. Stewart and Johnson (2009) also reported that LMX differentiation led to better team performance when high gender diversity existed. On the other side, Liao, Liu and Loi (2010) found that LMX led to higher self-efficacy and team creativity when low LMX differentiation existed. And many other researchers also suggested that LMX differentiation may induce negative effects on team level because it induces the perception of unfairness in a team context, eroding cooperation and social harmony (Hooper & Martin, 2008). On the while, other researchers have insisted that the linkage between LMX differentiation and detrimental outcomes is contingent on situational factors such as team climate. For example, Erdogan and Bauer (2010) found that LMX differentiation had a negative effect on team members' attitudes, relationships with coworkers only when team justice climate did not exist.

In addition to the predictors and consequences of LMX differentiation, measurement issue is currently on debate. So far, the majority of studies measured LMX differentiation by aggregating individuals' scores into group-level variable by calculating variance or standard deviation of LMXs in group. However, this method of obtaining objective level of LMX differentiation requires an intact sampling of employees within the team. If members with low LMX quality are not included in the sample, the resulted relative LMX figure has only limited validity (Erdogan & Bauer, 2015). On the other hand, researchers such as Hooper and Martin (2008) used a measure tapping perceived level of differentiation. This method has advantages since it does not require entire

sampling and, more importantly, perceived reality can more strongly shape one's attitudes and behaviors than reality (e.g., Kristof-Brown et al., 2005).

To summarize, the concept of LMX differentiation brought our attention to the core tenet of the exchange relationships leaders develop. Some valuable studies have broadened our knowledge on determinants, consequences, and measures of LMX differentiation (Kauppila, 2015; Liao et al., 2010; Henderson et al., 2008; Erdogan & Baur, 2010). However, far more areas remain unexamined. If actual or perceived variation in LMX qualities exists in a team, individuals may consciously and unconsciously compare their own LMXs with others and thus are affected by these relative standings of LMX. This is discussed in more detail below.

### **LMX and social comparison**

As discussed above, the differentiation of within group LMXs is prevalent phenomenon in workplaces (Erdogan & Baur, 2010; Hu & Liden, 2013). Duchon, Green, and Taber (1986) found that individuals can accurately capture the status of relationships their coworkers have with the leader. The presence of LMX differentiation and individuals' ability to gauge others' LMX imply that one can interpret his or her own LMX through social comparison processes (Vidyarthi et al., 2010). According to social comparison theory (Festinger, 1954), people are likely to use social comparison especially to the extent that objective and non-social measuring is not appropriate to use. For own social exchange quality with the leader is not accurately measurable and observable, people are more subjective to social comparison of LMX.



From this insight, a relative but distinct way of examining LMX differentiation has evolved, which is the investigation of the perception of one's individual treatment by the leader in comparison with others (e.g. Henderson et al., 2008; Herman, Ashkanasy, & Dasborough, 2012). Two pioneering studies greatly contributed to this line of research prompting subsequent studies. First, Henderson, Wayne, Shore, Bommer and Tetrick (2008) introduced the concept of relative LMX (RLMX), which refers to one's LMX quality relative to the average LMX quality in a work group. With the empirical data, they found that RLMX led to better performance and more sportsmanship behaviors, which was mediated by the perception of psychological contract fulfilment. Afterward, Vidhyarthi and his colleagues (2010) introduced the concept of LMX social comparison (LMXSC); the subjective comparison between one's own LMX and that of coworkers. They validated this concept by empirically testing that LMXSC had predictive validity on two types of job performance (task performance and citizenship behaviors) beyond the contribution of LMX and RLMX. RLMX and LMXSC are basically similar in that both capture the same phenomenon of how the focal employee's LMX differs from the LMXs of his/her coworkers. The difference lied in that RLMX is objectively obtained by subtracting group LMX mean from individual LMX, whereas LMXSC is directly obtained from the focal employee by surveying one's perception of own relative standing of LMX compared to peers. Although RLMX and LMXSC both are valuable measures to capture relative standing of LMXs, we adopt LMXSC as our focal construct based on several reasons. One limitation with RLMX is its requirement of intact sampling of team members (Erdogan & Bauer, 2015). Even the entire sampling is conducted, it is not

relevant because the focal employee may not reach and use information of LMXs of all group members. Rather, the one likely uses LMXs of those who interact closely and more frequently as referent points. Furthermore, Vidyarthi et al. (2010) explained that though one may base their perception of LMX on RLMX, LMXSC is more proximal constructs toward employee's attitudes and behaviors. This is because subjective perceptions of environment are more influential than real environment (Kristof-Brown et al., 2005). Also, Thomas et al. (2013) regarded LMXSC as "a more direct measure of the social comparison process as perceived through the eyes of the beholder."

Erdogan and Bauer (2015) mentioned that this new approach of LMX differentiation is quite interesting because "being the one *closer* to the leader has advantages that go beyond simply having a close relationship with the leader" (p. 55). Indeed, initial researches implied that those with high relative LMX quality enjoy unique advantages beyond the effects of objective level of LMX and thus engendering differing obligations toward exchange partners (Henderson et al., 2008; Vidyarthi et al., 2010). Existing point of view assumes that once individuals perceive LMX differentiation is present in their teams, they might respond negatively due to the sense of inequity (Uhl-Bien, Graen, & Scandura, 2000). Notwithstanding, the results can be changed when considering LMX differentiation at individual level, rather than group level. Once becoming a beneficiary of higher LMX or perceiving in that way, the focal employee likely responses in a positive way. Hu and Liden (2013) supported this assumption by finding that RLMX enhanced employee's self-efficacy and thus increased job satisfaction and job performance level. In a similar vein, this study will figure out *how* and *when* the

perception of relatively high LMX (LMXSC) positively affects the focal employee's behavior. In addition, we further extend this approach by proposing that certain type of employees will response to LMXSC more strongly. This is following recent researches that have started demonstrating how individuals may respond differentially to perceptions of their exchange relationships (e.g. Kamdar & Van Dyne, 2007).

### **Social Comparison Theory**

Both researches on relative LMX in social context (i.e. RLMX and LMXSC) are rooted in social comparison theory (Festinger, 1954). Wood(1989) defined social comparison as 'the process of thinking about information about one or more other people in relation to the self' (Wood, 1996, p. 520). Hu and Liden (2013) explained three fundamental reasons why people are concerned with others in the workplace: to understand own capability (Festinger, 1954); to gauge the possibility of performing well (Goethals & Darley, 1977); to see whether they are accepted and respected by social group (Darley, 2004). To serve these purposes, individuals constantly endeavor to identify relative standings compared to others, especially with those who are seen as more similar. In this sense, coworkers and their LMXs are relevant targets of social comparison because employees are exposed to the same leader, physical environment, practices on a daily basis and required to interact with each other to fulfill assigned tasks (Stapel & Koomen, 2005).

Social comparison literature shed light on several mechanisms people make comparison. One mechanism is through direct or mediated experience (Bandura, 1986).

Direct experience includes watching coworkers making a conversation with the leader in team meetings. Socially mediated experience can be obtained through various ways such as having informal chatting or hearing rumors (Hu & Liden, 2013). Through these conscious experiencing, individuals can gauge one's relative LMX standing in the team or social group. Surprisingly, social comparison may work through subliminal mechanism (Stapel & Blanton, 2004). That is, information which forms LMXSC can be perceived without awareness (Goethals, 1986). This is possible due to individuals' constant observation of nonverbal signs between coworker and the leader. For example, watching coworkers laughing or smiling with the leader may signal subliminal information on the qualities of coworkers' LMXs, thus shaping observer's LMXSC (Hu & Liden, 2013). This kind of unconscious occasion of social comparison process has been empirically supported by social psychologists (Gilbert, Price, & Allan, 1995; Stapel & Blanton, 2004).

Given this theoretical and empirical findings in social comparison literature, we may conclude that individuals 'inevitably' use social comparison in their social life, especially in the workplace. Thus, it is surprising that social comparisons have been rarely explored in the leadership literature, which is one of the most rigorously studied area in management (Greenberg et al., 2007). Only recently have researchers begun to investigate social comparison embedded within leadership-member relationships. For example, Tse et al.(2013) investigated how the perception of specific coworker's LMX relative toward one's own LMX leads to feeling of contempt and diminished help from coworkers. As this study showed, as our society becomes more competitive environment,

people are getting more sensitive to others' performance and status. Therefore, implications of social comparison happening in diverse areas deserve more examination in the future.

## **2.2. Self-efficacy**

Self-efficacy is one of the most important concepts in contemporary industrial-organizational psychology and organizational behaviors in management field. The initial study of Bandura (1989) which introduced social cognitive theory and its core concept of self-efficacy has been cited more than 40,000 times. This means that virtually all area in organizational research have utilized self-efficacy as a key concept, including area of leadership (Knippenberg, Knippenberg, Cremer, & Hogg, 2004), abusive supervision (Harvey, Stoner, Hochwarter, & Kacmar, 2007), performance evaluation (Bartol, Durham, & Poon, 2001), creative performance (Tierny & Farmer, 2011), pro-sociality (Caprara, Alessandri, & Eisenberg, 2012) and goal orientations (Middleton, & Midgley, 1997). Regarding this broad usage of self-efficacy, Zimmerman and Schunk (2003) described self-efficacy as “pervasive across contexts and domains of human functioning.”

Self-efficacy is originally defined as “people's judgment of their own capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). While the Bandura's definition focused on task-related context, Judge, Locke, Durham, and Kluger (1998) extended this concept to more general situation, conceptualizing *generalized self-efficacy* as individuals' belief in their capability to realize the motivation, cognitive resources, and actions required to meet

situational demands. According to various purposes and contexts of studies, scholars have selectively used either definition of self-efficacy or general self-efficacy with relevant measurements. Since this study focuses on the behavioral outcomes (i.e. job performance) which are valued in organization, we regard the term self-efficacy of Bandura (1986) as more appropriate in this study due to its task-related feature. Within this operationalization, high self-efficacious individuals believe that they will be successful in their own duties and responsibilities (Gardner & Pierce, 1998), while low self-efficacious individuals likely to engage in fewer coping efforts and give up more easily under challenging situations (Gist, 1987).

Scholars have struggled to identify and differentiate highly analogous and often confusedly used constructs on self-related constructs (Bong, Skaalvik, 2003). For the better understanding of the concept of self-efficacy, it deserves to briefly mention other related concepts. What is theoretically and empirically similar with self-efficacy is self-esteem (Gardner & Pierce, 1998). Self-esteem is "the basic appraisal people make of themselves" (Judge et al., 1998). It is reasonable that individuals who think themselves as significant, highly capable and successful in a broad sense (self-esteem) likely have higher expectation of achieving specific tasks (self-efficacy). Thus, these two self-concepts are highly related, but conceptual difference does exist. The study of Gardner and Pierce (1998) well illustrated the differences between self-esteem and self-efficiency. Two concepts differ in their targets (the self vs. the self related to some tasks), time perspectives (present evaluation of the self vs. future expectation of one's performance) and their conceptual closeness toward a belief versus an evaluation (Gardner & Pierce,

1998).

In terms of antecedents that form one's self-efficacy, scholars are consistent with the idea that self-efficacy gradually emerges from specific experiences of personal success (Bandura, 1982; Eden & Kinnar, 1991). For example, Gardner and Pierce (1998) commented that communication about successful achievement such as supervisory feedback is likely to increase employee's feeling of self-efficacy. The meta-analysis of Judge, Jackson, Shaw, Scott, & Rich (2007) found that individual traits such as mental ability, conscientiousness, extraversion and emotional stability were correlated with self-efficacy. However, past experience had a stronger correlation with self-efficacy than those individual traits had. Regarding the consequence of self-efficacy, given its nature of task-focused definition, what has received ample evidence is enhanced task performance (Sadri & Robertson, 1993). Indeed, the meta-analysis of Stajkovic and Luthans (1998) investigated the relationship between self-efficacy and work-relevant performance. Through the examination of 114 studies, they reported significant and positive correlation ( $\rho = .38$ ) between self-efficacy and performance. Furthermore, Bandura (1989) suggested that self-efficacious individuals less likely to experience fear of failure or unhappiness toward efficacy targets (i.e. assigned tasks). This is supported by Judge and Bono (2001) who found that high self-efficacy (generalized self-efficacy in this study) was more strongly related to job satisfaction ( $\rho = .38$ ) than other self-related concepts such as self-esteem, locus of control, emotional stability. Also, self-efficacy works in preventing detrimental attitudes and behaviors. For example, MacNab and Worthley (2007) showed that those with high self-efficacy have the inclination of

whistle-blowing behaviors, implying that one with high self-efficacy likely object to unethical behaviors. On the contrary, low level of self-efficacy are not only related to poor performance but also induce many kinds of psychological harms. Many a prior study on the disadvantages of having lower self-efficacy reported its relationship with higher depression, anxiety, helplessness (Scholz, Dona, Sud, & Schwarzer, 2002), job stress and burn out (Schwarzer, Hallum, 2008).

Considering causal relationships where experiences generated in work-related context shape self-efficacy and, subsequently, lead to important work outcomes, it seems natural that numerous organizational researchers put great attention to mediating role of self-efficacy. Especially with regard to leadership and LMX, self-efficacy has been found to mediate various independent variable including transformational leadership (Salanova, Lorente, Chambel, & Martínez, 2011), ethical leadership (Ma, Cheng, Ribbens, & Zhou, 2013), LMX (Liao et al., 2010), RLMX (Hu & Liden, 2013) and job performance. Likewise, this study poses that exchange relationships with leader and what exchanged through those relationships are relevant predictors of self-efficiency, and that self-efficacy will mediate the relationship between LMXSC and job performance.

### **2.3. Felt-obligation**

When an individual is treated well, the one feels the necessity of reciprocating toward whom provided favorable treatment (Gouldner, 1960). The reason why people intuitively feel such obligation is to maintain the positive self-concept of justice and fairness by repaying appropriately and to avoid negative consequence associated with the violation



of social reciprocity norms (Eisenberger et al., 2001). This norm of reciprocity can be extended to organizational context since workplace consists of visible and invisible exchanges among members and organization. In this sense, Eisenberger et al. (2001) defined felt obligation as “a prescriptive belief regarding whether one should care about organization’s well-being and should help the organization reach its goals.” (Eisenberger et al., 2001)

Felt obligation especially plays a key role in social exchange literature. According to social exchange theory (Blau, 1964), social exchange, unlike economic exchange, incorporates unspecified obligation of mutual reciprocity. Given that, perceiving better treatment through social exchange relationships (e.g., high LMX or high perceived organizational support) positively affects the individual attitudes and behaviors beyond the level of economic contract based on psychological obligatory mechanism. In other words, when employees receive better benefits from leaders, organizations or coworkers, they feel that they need to reciprocate with somewhat valuable, which is usually job performance, citizenship behaviors or helping behaviors. Indeed, Eisenberger et al. (2001) found that perceived organizational support (POS) by employees was positively related to felt obligation to concern about the organization's effectiveness, thus leading to affective commitment and in-role performance. In addition to POS, LMX which is another important social exchanges in organization also posits the mediating role of felt-obligation in its positive effects on employee’s behaviors, but unfortunately not many empirical studies validated this assumption.

Eisenberger et al. (2001)’s conceptualization of felt obligation largely focus on

reciprocal toward ones' organization. However, the concept of felt obligation can be adapted depending on the context of study. For example, it can specify other target of reciprocating behaviors such as felt obligation toward coworkers (Mossholder, Settoon, & Henagan, 2005) or felt obligation for constructive change (Liang, Farh, & Farh, 2012).

In order to identify the mediating role of felt obligation between LMXSC and job performance, we use the felt-obligation toward leader by simply change the target of the organization to the leader. Felt-obligation toward organization may be used as the consequence of perceiving higher relative LMX among coworkers (LMXSC), since supervisor support via high LMXSC is viewed as supportive actions of the organization (Eisenberger et al., 2001). However, we utilize leader-targeted felt obligation because the leader differentiate LMX among workers and thus the recipient likely to have more strong feeling of reciprocation toward the leader rather than the organization.

## **2.4. Exchange Ideology**

With regard to social exchanges between leader and member, one important individual traits that should be considered is exchange ideology (Cropanzano & Mitchell, 2005). Although every individual is inclined to reciprocate for what they received, not all individuals value such reciprocity to the same degrees. *Exchange ideology* captures individual difference in the strength of belief that work effort should depend on the treatment by the organization (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Variance in exchange ideology among individuals can originate from personal past experience, observation through coworkers and communication such as persuasion saying the repayment should be dependent on received value (Eisenberger et al., 2001).

Eisenberger et al. (1986) found that the association between POS and job attitudes (attendance in this study) was higher among teachers who had strong exchange ideology.

An employee with strong exchange ideology put more weight on what they gain than what they give (Coyle-Shapiro & Neuman, 2004). This focus leads to some bias in interpret and respond to organizational context. They tend to have negativity bias which induce them to concentrate on the negative information and experience (Rozin & Royzman, 2001). This bias decreases the possibility and the degree of reciprocal behaviors.

In most studies, exchange ideology was hypothesized and tested as a moderating factor (e.g. Witt, 1991). For example, Witt (1991) investigated the moderating role of exchange ideology on the relationship between job attitudes and OCBs. Scott and Colquitt (2007) found that exchange ideology plays a moderating role on justice – behavioral outcome relationship in work place, and its moderating effects were even stronger than the Big Five personality factors. However, the literature on exchange ideology is in its early stage rather than mature one in that its main effect is not frequently investigated. One exception is Takeuchi, Yun, Wong (2011)'s study which considered exchange ideology's main effects on task performance. Takeuchi and his colleagues found that individuals with strong exchange ideology are less likely feel obligated toward the organization, thus lessening task performance.

## **2.5. Social Comparison Orientation**

Although it is true that social comparison is frequently triggered by external factors,

many a scholars agree on that some react to social comparison more sensitively and others do less across various situations according to their dispositions (Gilbert, Giesler, & Morris, 1995; Steil & Hay, 1997). Based on this arguments and observations, Gibbons and Buunk (1999) operationalized the concept of *social comparison orientation*, which refers to individual tendency to compare various aspects of oneself with those of others (Gibbons & Buunk, 1999). High social comparison orientation features paying more attention to behavior and thought of others. Furthermore, individuals who have high social comparison orientation try to reduce uncertainty on themselves by building self-images based on information attained by comparison with others (Buunk & Mussweiler, 2001). In other words, they likely to experience chronic uncertainty, thus having low self-esteem, high social anxiety and depression.

The literature of social comparison orientation has amassed valuable findings. Many of these findings are conducted in diverse clinical fields in order to find the effects of social comparison orientation on patients suffering from critical diseases. For example, in Van der Zee, Oldersma, Buunk, & Bos (1998)'s study, cancer patients who were high in comparison orientation spent more time with a computer program reading the interviews of others who are in same situation of suffering cancer. However, as research of social comparison broadens toward various fields, social comparison orientation of employees who work in organization is gaining attention from researchers. This arise in literature is unsurprising given that the time employees spend at work and socialized environment within team-based structure. Buunk, Zurriaga, Gonzalez-Roma, and Subirats (2003) reported that those high in social comparison orientation experience heightened feelings

of relative deprivation when engaging in upward comparisons. Thau, Aquiano and Wittek (2007) found that the negative relationship between the employee's perception of interactional justice and their antisocial work behaviors was stronger for those with high social comparison orientation. Especially in LMX literature, Tse et al. (2013) reported that when social comparison orientation is high, an employee likely have a stronger feeling of contempt with the coworker who has similar LMX with oneself. All these prior findings imply that social comparison orientation amplifies the influence of negative cues from social comparison information. On the other hand, the evidence for the role of the orientation when the positive comparison information is received (e.g. LMXSC) has not been proposed and tested. Therefore, in this study, considering the underpinning feature of social comparison orientation, which is tendency to focus on comparison information, we suggest social comparison orientation might moderate the effect of LMXSC. The detail of suggestion will be discussed below.

## **2.6. Job Performance**

Performance valued in organization has multiple dimensions (Campbell, 1999). Researchers and practitioners have acknowledged various types of employee performance which can strengthen organizational effectiveness and viability from more formal and required performance (e.g. task performance) to informal and voluntary performance such as proactive behaviors (Parker, Williams, & Turner, 2006) and knowledge sharing (Bartol & Srivastava, 2002). However, still the dimensions of more importance and frequently studied are two main dimensions of performance: task

performance and organizational citizenship behaviors (OCBs) (Williams & Anderson, 1991; Yun, Takeuchi, & Liu, 2007). Task performance is defined as behaviors "that are directly involved in producing goods or services, or activities that provide indirect support for the organization's core technical processes" (Van Scotter, Motowidlo, & Cross, 2000, p. 526). Finishing assigned task in a timely manner can be a good example of task performance. OCBs, on the other hand, are defined as voluntary behaviors by employees which go beyond the required job description and thus ultimately contribute to organizational effectiveness (Organ, 1988). Although the behaviors like helping other coworkers or working until late are not included as task performance and not rewarded by organizations, they are recognized as citizenship behaviors. In this study, following many prior researchers (Yun et al., 2007; Kamdar & Dyne, 2007; Wang, Law, Hackett, Wang, & Chen, 2005), we investigate both task performance and OCBs to comprehensively catch the effects of our focal constructs on both required and discretionary behaviors.

## **III. HYPOTHESIS DEVELOPMENT**

### **3.1. The Mediating Mechanism of Self-efficacy**

#### **LMXSC and self-efficacy**

People incorporate a rich array of social information into their working self-concepts automatically (Bargh, 1989; Staple & Blanton, 2004). Among various types of self-concepts, self-efficacy, defined as one's belief in capabilities to organize and fulfill the assigned tasks (Bandura, 1986), is relevant in work place due to its focus on task fulfilment. Within this context, LMXSC-the subjective evaluation of one's standing of LMX among coworkers- provides valuable social comparison information, which, in turn, may shape employee's self-evaluation, especially self-efficacy (Greenberg et al., 2007; Hu & Liden, 2013). According to social comparison theory (Festinger, 1954), individuals can engage in either types of comparison; downward or upward comparison. Upward comparison refers to socially comparing with others who are considered to be better off and downward comparison refers to comparing with those who are thought to be worse off (Hu & Liden, 2013). Numerous researches have revealed the positive effects of engaging in downward comparison for individuals. For example, those engaging in downward comparison experience more positive feeling (Lyubomirsky & Ross, 1997) and self-confidence (Hakmiller, 1966). With acknowledging these features of social comparison, employees with high LMXSC are likely to experience downward comparison since, by definition, high LMXSC means they are better off at least in LMX relationships no matter how their actual abilities are. To be more specific, employees with high LMXSC may feel receiving more favorable attention and support from the

leader. This is quite important source to shape self-efficacy for two reasons. Self-efficacy gradually emerges from specific experiences of personal success (Bandura, 1982; Eden & Kinnar, 1991). Since the time and resources the leader exchanges with subordinates are limited rather than infinite, gaining more portion of distributed LMX can be interpreted by the beneficiary as more successful experience. Furthermore, supervisors' attention itself is regarded as possessing competence in work place. The situational information used to form higher LMXSC may as well be observed by other coworkers working in the same work spaces, given the context of sharing a single supervisor with multiple coworkers. Thus, the focal employee might feel in that they are highly valued person in organizational context so as to increase the feeling of self-efficacy. Some empirical findings provide both direct and indirect support for this reasoning. Liao et al. (2010) have found that social comparison cues generated from LMX differentiation weakened the effect of objective LMX on self-efficacy. More direct evidence of Hu and Liden (2013) found that RLMX (not perceived but calculated) is positively related to self-efficacy. In this study, Hu and Liden (2013) postulated that individuals are aware of all LMX information surrounding themselves to figure out own RLMX level, which can lead to discrepancy between real standing of LMX and information used for internal social comparison process. On the other hand, in this study, LMXSC, directly capture the result of internal social comparison process (Thomas et al., 2013) by asking employees of their own relative standings. Therefore, LMXSC likely to have more clear relationship with self-concepts (i.e. self-efficacy).

*Hypothesis 1. LMXSC is positively related to self-efficacy.*



## **Self-efficacy and job performance**

Self-efficacy refers to one's belief to successfully complete assigned task (Bandura, 1986). Once individuals perceive themselves to be potentially competent, they tend to have self-regulating motivation to act in a way to be competent in reality (Bandura, 1997, 2001). Self-regulating behaviors include putting more effort on tasks or not giving up in the face of challenging situations (Bandura, 1986). Also, self-efficacious people set higher goals from the outset (Liao et al., 2010). All these factors make individuals with high self-efficacy achieve better performance. Indeed, a meta-analytic review (Stajkovic & Luthans, 1998) reported that self-efficacy is strongly related to task performance ( $r = .34$ ). Also, individuals with high-self efficacy are also likely to engage in more discretionary behaviors to help organizational effectiveness (i.e. OCBs) (McAllister, Kamdar, Morrison, & Turban, 2007; Hu & Liden, 2013). Perceiving high self-efficacy likely increase the belief that they are capable of help others without diminishing the level of own task performance, thus increasing the frequency and level of citizenship behaviors (Hu & Liden, 2013). In addition, self-efficacy can also lead to better job performance via indirect ways such as job satisfaction. Self-efficacy is known to increase job satisfaction (Judge & Bono, 2001) because self-efficacious individuals are more likely to be optimists and have bright future of themselves (Bandura, 1986). As well-established, better job satisfaction promotes employees to increase various types of performance, including task performance and OCBs.

*Hypothesis 2a/b. Self-efficacy is positively related to (a) task performance and (b) OCBs.*

## **The Mediating role of Self-efficacy**

Prior studies on relative LMX (both RLMX and LMXSC) proved that individuals' LMX standings among coworkers have a positive influence on their task performance and OCBs (Henderson et al., 2008; Vidyarthi et al., 2010). Through what mechanism, does this perception of relatively higher LMX standing lead to positive workplace outcomes? Extant research implied that 'self-related evaluation' derived from social comparison serves as a basis for cognitive, emotional, and motivational processes, thus predicting work attitudes and behaviors (Buunk & Gibbons, 2007; Greenberg et al., 2007). Based on this view, we posit that high LMXSC encourage the perceiver's self-efficacy which result in better job performance (i.e. task performance and OCBs). LMXSC enhances the feeling of self-efficacy by signaling the focal employee's competency enough to deserve more attention from the leader. This feeling of confidence enables employees to set higher goals and promote them to stick to those challenging targets. Thus, integrating the assumption suggested for Hypotheses 1 and 2, we suggest that self-efficacy mediates the relationship between LMXSC and job performance. We posits a partial rather than a full mediating effects of self-efficacy. The rationale behind this is that LMXSC can be linked through job performance not only by enhancing one's psychological ability to perform better (self-efficacy), but also by triggering their feeling of indebtedness to reciprocate (felt obligation).

*Hypothesis 3a/b. Employee's self-efficacy mediates the positive relationship between LMXSC and (a) task performance, (b) OCBs.*

## 3.2. The Mediating Mechanism of Felt obligation

### LMXSC and felt obligation

Felt obligation refers to employee's belief that the one is personally responsible for serving the best interests of his/her employer (Eisenberger et al., 2001). Extending this concept, this study utilizes the concept of felt obligation *to supervisor* that has change the psychological target of reciprocating behaviors from organization to the direct leader. Felt obligation to organization was stronger for those who had better social exchange relationships with leader than those who had worse (Piccolo, Bardes, Mayer, & Judge, 2008). This is because high LMX is rather dependent on organizational support. Only when affluent resource and support from organizations are given to managers, they are able to establish better quality of LMX with subordinates (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). On the other hand, differentiation of LMX happens even when leader receive less supports from organizations and the distribution of own attention is totally up to leaders' decision. Therefore, when the employee perceive better standing in LMX with the supervisor, he or she likely feels felt obligation toward the supervisor rather than toward the organization. Therefore, this study focuses on employees' felt obligation to the leader.

Social exchange theory describes that social exchange, contrary to economic exchange, entails unspecified obligation of mutual reciprocity. The norm of reciprocity arises from a sense of obligation that causes the well-treated party to feel obligated to respond in other desirable ways (Gouldner, 1960). Based on these theory and underlying norm, LMX literature has consistently shown that employees with high-quality LMX

relationships have a tendency to reciprocate for their supervisors by showing better performance or engaging in discretionary behaviors (Ilies et al., 2007; Liden et al., 1997). Although the majority of LMX studies just ‘assumed’ felt obligation as a psychological mechanism through which higher LMX shapes employee’s attitudes and behaviors, Piccolo et al. (2008) actually tried to measure such psychological state and proved that LMX is positively related with felt-obligation (toward organization).

In a similar vein, employees who perceive higher LMXSC are likely to experience strong feeling of obligation to reciprocate. It should be noted that higher LMXSC does not guarantee the absolutely large amount of resources (information, psychological support, promotion opportunities or else) given to the focal employee as given through high objective LMX. LMXSC only signals employees that they are receiving more favorable treatment than their coworkers, no matter how much the absolute level of such treatment is. Still, this sense of relative standing in LMX is enough to trigger employee to feel obliged to the leader.

The norm of reciprocity suggests the receiver reciprocates as much favorably as he or she received. In that sense, social comparison process involves to enlarge or to downsize the perceived value of what is gained through exchange relationships. According to social comparison theory (Festinger, 1954), since resources from leaders are invisible and not readily measurable by objective tools, people tend to use social comparison to assess its value. Hence, those who perceive being provided with better treatment, while other employees are not, likely construe the given resource more unique and valuable. Accordingly, these employees may feel more obliged to return

commensurately with what leaders highly value. The earlier findings in various settings have shown that such subjective evaluation through social comparison brings strong motivational force to change individuals' attitudes and behaviors (Mussweiler, Rüter, & Epstude, 2004; Stapel & Blanton, 2004). Therefore, employees who have high LMXSC also likely have strong felt obligation to the supervisor than those have low LMXSC.

*Hypothesis 4. LMXSC is positively related to felt obligation.*

### **Felt obligation and job performance**

The relationship between felt obligation generated by LMXSC and job performance is fairly clear. In order to resolve the feeling of indebtedness, the recipient reciprocates with what the partner of exchange relationship (either organization or leader) highly values. Scholars have revealed various positive attitudes or behaviors employee use to do such reciprocation (Takeuchi et al., 2011) such as organizational commitment (Arshadi, 2011), constructive change (Liang et al., 2012), voice behaviors (Ng, Feldman, 2015), lessened withdrawal behaviors (Piccolo et al. 2008) and job performance. Among them, individuals are likely to increase the level of task performance and OCBs given its significance for their leader and organization. Supporting this reasoning, Wang et al. (2005) illustrated task performance as 'a form of currency' used in social exchanges between leader and follower. Additionally, Eisenberger et al. (2001) found that felt obligation was correlated not only with task performance but also with employee spontaneity, which is the similar concept with OCBs.

*Hypothesis 5. Felt obligation is positively related to (a) task performance and (b) OCBs.*

### **The Mediating role of felt obligation**

Wang et al. (2005) explained that when employees recognize more favorable treatment by the leader, it helps employees generate positive self-concepts and feel obliged to reciprocate, thus motivating desirable behaviors. Accordingly, we suggested that those with high LMXSC likely enhance job performance because they believe own capability. In addition to this instilling of psychological power, employees are also motivated to demonstrate desirable behaviors since they feel they have to. This assumption of two compatible underlying mechanisms is not new in explaining individuals' behaviors. Choi (2007) posited that a set of workplace traits (e.g. supportive leader) induces change-orientated OCBs via two constructs; psychological empowerment and felt responsibility.

The mediating role of felt obligation largely relies on the theory of social exchange theory and the norm of reciprocity. This simple and intuitive rule says 'when one person treats another well, the reciprocity norm obliges the return of favorable treatment' (Arshadi, 2011, p. 1103). Based on this theoretical background, numerous researches regarded felt obligation as an intervening factor that nested within social exchange relationships (e.g., Eisenberger et al., 2001). For example, Arshadi (2011) found that POS, the favorable social exchange between the organization and employee, invoked felt obligation and thus resulted in better in-role performance and lower turnover intention. Following theories and prior researches, we suggest that LMXSC provides employees with stronger drive to conduct reciprocal behaviors, which leads to better task performance and more OCBs.

*Hypothesis 6. Employee's felt obligation to supervisor mediates the positive relationship between LMXSC and (a) task performance, (b) OCBs.*

### **3.3. The moderating role of exchange ideology**

When employees perceive higher LMXSC, they tend to reciprocate for this favorable treatment in order to resolve the feeling of indebtedness (Gouldner, 1960). Of course, although such reciprocity is a human universal, this does not necessarily mean that every individual considers reciprocity to the same degree. Indeed, there has been strong evidence supporting the existence of individual differences (Rousseau & Schalk, 2000; Shore & Coyle-Shapiro, 2003). One such individual trait which is relevant with social exchange relationship is *exchange ideology*, which refers to ‘employee’s belief that it is appropriate and useful to base their concern with the organization’s welfare and their work effort on how favorably they have been treated by organization’ (Eisenberger et al., 2001, p. 43). In Eisenberger et al. (2001)’s research, exchange ideology moderated the positive relationship between POS and employee’s felt obligation. To be more specific, employees with strong exchange ideology experienced stronger feeling of reciprocity when they perceived favorable treatment from the organization. This finding implies that the consequence of social exchange relationships may be influenced by the degree to which the perceiver accepts the norm of reciprocity. Based on this earlier finding, this study applies the role of such individual difference (i.e. exchange ideology) to social exchange relationship between leaders and subordinates. Therefore, here exchange ideology (to leader) means one’s belief that work effort should be determined by how

much they are given from the leader.

Since most employees have exchange ideology to some degree (Eisenberger et al., 2001), high LMXSC likely have positive correlation with felt obligation. However, employees with stronger exchange ideology should experience higher level of felt obligation than those with lower exchange ideology. In the opposite direction, we may also expect that one with strong exchange ideology will experience more severely decreased level of felt obligation than weak exchange ideology individual experience when own relative standing of LMX is low.

*Hypothesis 7. The positive relationship between LMXSC and felt obligation will be stronger for the employees with strong exchange ideology than weak exchange ideology.*

### **3.4. The moderating role of social comparison orientation**

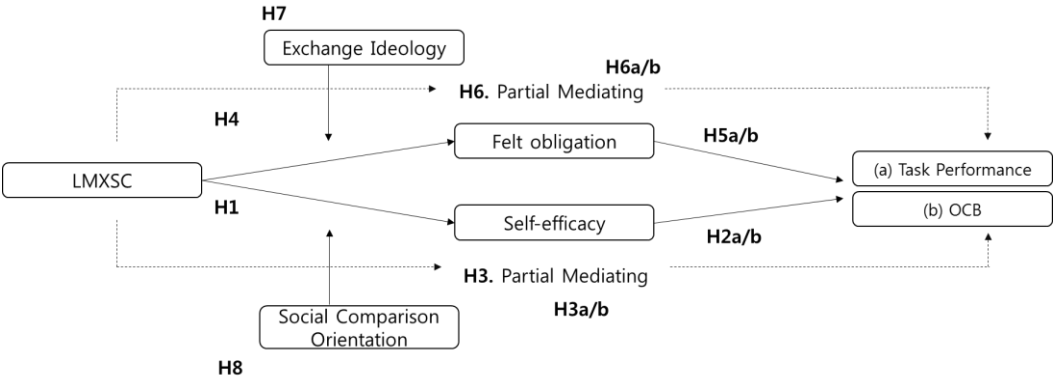
The aforementioned relationship between LMXSC and self-efficacy explained that social comparison information strongly affects self-concepts even without consciousness (Stapel & Blanton, 2004; Bargh, 1989). However, it is noteworthy that not all individuals react to such social comparison to the same degree (Henderson et al., 2008). In this sense, many researches have shown interest on social comparison orientation as a possible moderator which may increase or reduce the effect of social comparison phenomenon on the individuals' psychological and behavioral outcomes. Social comparison orientation basically means the tendency to which individual search for information on self through comparisons with others (Darnon, Dompnier, Gilliéron, & Butera, 2010). Therefore, employees who have higher social comparison orientation are predisposed to pay more



attention to their given treatment from the leader. Since the social interaction with the shared leader is observed and shared with other coworkers in the same work place, these employees may feel that they deserve to gain more attention from the leader and experience enhanced self-efficacy. On the other hand, employees who have lower social comparison orientation, by definition, put less weight on social comparison information such as LMXSC. Accordingly, these people are less likely to feel enhanced self-efficacy even they are standing on relative high position in LMX among others.

*Hypothesis 8. The positive relationship between LMXSC and self-efficacy will be stronger for the employees with strong social comparison orientation than weak social comparison orientation.*

**Figure 1. Hypothesized Research Model.**



## IV. METHODS

### 4.1. Sample and Procedure

Data were collected using a survey method. Pairs of questionnaires were distributed to employees and their direct supervisors working in multiple firms in Republic of Korea. The employees answered for the variables including social exchange relationships, two mediators (i.e. felt obligation, self-efficacy) and two contextual moderators: exchange ideology, social comparison orientation. Their supervisors independently rated dependent variables: the focal employee's task performance and OCBs. This way of collecting data from two independent sources helps us to minimize common method bias which is common concern in organizational behavior studies (Podsakoff, Mackenzin, Lee, & Podsakoff, 2003). To maintain confidentiality and encourage honest response, the answered questionnaires were delivered to the researcher with sealed envelopes. In total, 200 pairs of questionnaires were distributed and 163 complete pairs were returned, giving a response rate of 81.5%. One sample was dropped before analysis due to its obvious incredibility.

The final sample of 162 supervisors had an average age of 40.41 ( $SD = 7.60$ ) and 73.3% were male. They had their present job for 118.63 months ( $SD = 104.73$ ). Regarding identical number of their employee samples, the average age was 31.05 ( $SD = 6.16$ ), and 57.8% were male. The average tenure of employee samples was 40.57 months ( $SD = 52.93$ ).

## 4.2. Measures

The measures are described below. Since all measures are originally developed in English, they are translated to Korean following the process recommended by Brislin (1980). All of variables were measured with a 7-point Likert scale (from 1 = strongly disagree to 7 = strongly agree).

***Social exchange relationships.*** LMX was assessed with the measure developed by Graen and Uhl-Bien (1995) in which the sample item says “My working relationship with my manager is effective.” This measure was found to be cross-culturally validate across western and non-western cultures (Liao et al., 2010; Schaubroeck & Lam, 2002). The focal interest of this study, LMXSC, was assessed using the measure developed by Vidyarthi et al. (2010). This measure consists of 6 items comparing one’s social relationship with that of others. The sample item of LMXSC says “I have a better relationship with my manager than most others in my work group.”

***Self-efficacy.*** Employees measured their own self-efficacy level with the measure developed by Chen, Gully and Eden (2001). This measure includes 8 items including the one saying "I will be able to successfully overcome many challenges."

***Felt Obligation.*** This study used the adapted version of the 6-item measure developed by Eisenberger et al. (2001) to measure felt obligation toward supervisor. Among the original items, the one saying "I owe it to the organization to do what I can to ensure that the organizations' customers are well-served and satisfied" was omitted since not all our respondents were in charge of customer-related job. Although original version was designed to tap the felt obligation toward organization, here we tap felt obligation

toward the supervisor by replacing the word ‘organization’ with ‘supervisor’. The sample item of felt obligation is: "I feel a personal obligation to do whatever I can to help my supervisor achieve his/her goals."

***Exchange Ideology.*** Eisenberger et al. (1986)'s 8-item scale was used to get a self-assessment of exchange ideology. A sample item reads "An employee should only work hard if his or her efforts will lead to a pay increase, promotion, or other benefits." Following Eisenberger et al. (1986), a higher score signals a stronger exchange ideology.

***Social Comparison Orientation.*** Social comparison orientation was measured through the shortened version of 11-item Iowa-Netherlands Comparison Orientation Measure (Gibbons & Buunk, 1999). Schneider and Schupp (2014) have shortened this original measure developing 6-item measure and provided statistical support of using it. A sample item says "I often compare how I am doing socially (e.g., social skills, popularity) with other people."

***Task performance.*** Supervisors evaluated employees' task performance. Task performance was tapped with the measure developed by Ashford, Lee, and Bobko (1989). Among various types of measures calibrating job performance level, this four item measure has advantage of questioning relative level of focal employee's performance level in comparison with others rather than asking the absolute quality of performance. This question may lessen possibility reckless positive evaluation of supervisor and help them consider more objectively. The sample item says "This employee performs better than many other employees who perform the same job."

***Organizational Citizenship Behaviors.*** To measure the level of employees' OCB, we adopted well-established measure of Lee and Allen (2002). Although this 16-item measure consists of two sub-dimensions according to the direction of benevolent behaviors; toward individuals (OCBI) and the organization (OCBO), we consider it as one overall dimension of OCB since the distinction of concrete OCBs is not our focal interest. We attained the level of employee OCBs by averaging all 16 items, one of which says "Willingly give your time to help others who have work-related problems."

***Control variables.*** Following prior literatures on job performance (e.g., Lang, Zettler, Ewen, Hulsheger, 2012), demographic variables such age, gender and education level were basically included as control variables. In addition, LMX was also controlled when testifying the hypotheses since LMX plays a role as the baseline of LMXSC judgment (Vidyarthi et al., 2010).

### **4.3. Analytical Strategy**

To identify our mediating mechanisms between LMXSC and job performance, this study adopt the mediation process introduced by Preacher and Hayes (2008). The majority of mediation study have been conducted based on the classical Baron and Kenny(1986)'s method, a rising number of scholars have started to use recently developed method of Preacher and Hayes with acknowledging the shortcomings of the old method (Hayes, 2009; Shrout & Boldger, 2002; see Zhao, Lynch, & Chen, 2010 for more details). Zhao et al. (2010) argued in a strong voice that the valuable and potential research model should not be abandoned just because they failed to satisfy all four

conservative conditions of Baron and Kenny method and recommended the adoption of mediation process of Preacher and Hayes. This assertion has gained supports by numerous scholars remarking more than 1600 citation, and actually many studies in major journals utilized new method of mediation process (e.g., Li et al., 2015, Srivastava, Bartol, & Locke, 2006). The development of SPSS process (Hayes, 2013) accelerated this change in methodology. According to Preacher and Hayes (2008), three conditions need to be satisfied to justify mediating effects (Li et al., 2015). First, the independent variable and the mediator should be significantly correlated. Second, the mediator must have significant influence on the dependent variable even after controlling the independent variable. Third, the indirect effect of the independent variable on dependent variable should be significant as well. First and second steps will be tested with hierarchical regression and the last step of identifying indirect effect will be conducted with the process of Hayes (2013). Furthermore, to identify moderating effects, the interaction terms of LMXSC  $\times$  exchange ideology and LMXSC  $\times$  social comparison orientation will be added in the relevant model. Since hierarchical regression cannot analyze multiple dependent variables at one time, the analysis will be conducted several times on mediators and final outcome variables.

## V . RESULTS

Descriptive statistics including means, standard deviations, and correlations among the variables are depicted in Table 1. Also, the figures of Cronbach's Alpha were reported in the same table and showed satisfying reliabilities across all variables ranging from .76 or higher.

Focal variables were mean-centered in advance to regression analysis to prevent the potential problem of multicollinearity (Cohen, Cohen, West, & Aiken, 2013). The results of regression analyses are described in Table 2 and 3. To verify that multicollinearity issue is not present, we examined the variance inflation factor (VIF) and the condition index (CI) of all variables, and all figures were well satisfying the established standards (i.e. VIF of less than 10; CI of less than 30) (Cohen et al., 2013).

According to Table 4 and 5, LMXSC had strong significant influence on self-efficacy ( $\beta = .19, p < .01$ ) and felt obligation ( $\beta = .19, p < .01$ ) even after LMX was included simultaneously, providing full support for Hypothesis 1 and 4. At the same time, self-efficacy was significantly related to both job performance; task performance ( $\beta = .19, p < .05$ ; see Table 2) and OCBs ( $\beta = .23, p < .001$ , see Table 3). Thus, Hypothesis 2a and 2b were supported. Felt obligation was only related to OCBs ( $\beta = .18, p < .05$ ), but not to task performance ( $\beta = .13, ns$ ). Therefore, Hypothesis 5b was only supported.

***The mediation effects.*** We tested the mediation hypotheses by checking three conditions to justify meditation effect proposed by the Preacher and Hayes (2008). The positive effects of LMXSC on self-efficacy ( $\beta = .19, p < .01$ ; Table 4) was significant,



satisfying the first condition of mediation. After LMXSC was controlled, self-efficacy was correlated with task performance ( $\beta = .16, p < .1$ ; Table 2) and citizenship behaviors ( $\beta = .17, p < .05$ ; Table 3). Thus, second condition was met. To identify the indirect effect of LMXSC on job performance, Hayes (2013)'s SPSS process was adopted. As a result, the indirect effect of LMXSC on task performance through self-efficacy was significant (95% CI = [.00, .09]). Also, the indirect effect of LMXSC on citizenship behaviors through self-efficacy was significant (95% CI = [.00, .10]). Zhao et al. (2010) articulated that Baron and Kenny's three test needs to be replaced with this simpler step of the bootstrap testing of the indirect effect. And they added, "We argue that to establish mediation, all that matters is that the indirect effect is significant." (Zhao et al., 2010, 204p.). In this sense, these results demonstrated the mediating role of self-efficacy between LMXSC and job performance, fully supporting Hypotheses 3a and 3b.

The same steps were repeated to verify the mediating effect of felt obligation between LMXSC and job performance. LMXSC and felt obligation was significantly correlated ( $\beta = .19, p < .01$ ; Table 5), thus satisfying the first condition. However, when LMXSC was included as controlled variable, the effects of felt obligation on task performance ( $\beta = .10, ns$ ) and citizenship behaviors ( $\beta = .12, ns$ ) were both insignificant. Therefore, the Hypotheses 6a and 6b were not supported.

In Table 5, the interaction term of LMXSC and exchange ideology was additionally entered to test the moderating effect. However, the proposed moderating effect of exchange ideology between LMXSC and felt obligation was not significant ( $\beta = .02, ns$ ), failing to provide support for Hypothesis 7. On the while, the interaction of

LMXSC and SCO in Table 4 was marginally significant. This result renders moderate support for Hypothesis 8. To interpret this interaction result, we plotted the graph by calculating the predicted high and low representative values of the moderator (one standard deviation above and below the average) following Aiken and West (1991). As shown in Figure 1, the effect of LMXSC on self-efficacy was stronger for the employees who have high social comparison orientation. Thus, the directions of plots are in line with the prediction of Hypothesis 8.

**Table 1. Descriptive Statistics and Correlations among Variables**

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Age	31.05	6.16											
2. Gender	1.42	.50	-.11										
3. Education	2.98	.66	.24**	-.03									
4. LMX	5.11	1.01	.18*	-.20**	.03	(.90)							
5. LMXSC	4.59	1.17	.12	-.12	.06	.59**	(.92)						
6. Self-efficacy	5.39	.93	.20*	-.14	.09	.45**	.42**	(.95)					
7. Felt obligation	4.57	.92	.12	-.15	.07	.49**	.45**	.42**	(.76)				
8. Exchange Ideology	3.66	1.04	-.14	.04	.07	-.25**	-.08	-.30**	-.33**	(.87)			
9. SCO	4.39	.91	-.12	.05	.08	.04	.10	.14	.17*	.18*	(.76)		
10. TP	5.59	.98	-.05	-.04	.10	.38**	.34**	.31**	.29**	-.14	.15	(.94)	
11. OCBs	5.32	.85	.00	-.14	.06	.37**	.44**	.34**	.33**	-.15	.18*	.66**	(.94)

*Note.* N's range from 160 to 162 due to occasional missing data. Reliabilities are on the diagonal in parentheses. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison. SCO = Social comparison orientation. OCBs = Organizational citizenship behaviors.

\*  $p < .05$ . \*\*  $p < .01$ .

**Table 2. Multiple Regression Results for Task Performance**

Variable	Task Performance					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	-.15*	-.16*	-.17*	-.17*	-.16*	-.16*
Gender	.03	.03	.04	.04	.04	.04
Education	.13	.12	.12	.11	.12	.11
LMX	.41***	.31**	.33***	.27**	.35***	.28**
<u>Main effects</u>						
LMXSC		.17+		.13		.15
Self-efficacy			.18*	.15+		
Felt obligation					.12	.09
Overall F	8.10***	7.28***	7.61***	6.72***	6.97***	6.27***
$R^2$	.17	.19	.20	.21	.19	.20
$\Delta F$		3.47+	4.82*	3.36+	2.19	1.19
$\Delta R^2$		.02	.03	.02	.01	.01

*Note.* N = 159. All variables were centered at their means. Figures indicate standardized regression coefficients. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison.

+ $p < .1$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 3. Multiple Regression Results for OCBs**

Variable	Organizational Citizenship Behaviors					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	-.08	-.09	-.11	-.10	-.09	-.09
Gender	-.09	-.09	-.08	-.08	-.08	-.08
Education	.06	.05	.05	.04	.06	.05
LMX	.37***	.17+	.27**	.12	.28**	.13
<u>Main effects</u>						
LMXSC		.33***		.28**		.30**
Self-efficacy			.24**	.18*		
Felt obligation					.19*	.13
Overall <i>F</i>	6.95***	8.76***	7.60***	8.36***	6.70***	7.73***
<i>R</i> <sup>2</sup>	.15	.22	.20	.25	.18	.20
$\Delta F$		13.71***	8.82**	5.18*	4.99*	1.19
$\Delta R^2$		.07	.05	.03	.03	.01

*Note.* N = 159. All variables were centered at their means. Figures indicate standardized regression coefficients. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison.

+ $p < .1$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 4. Multiple Regression Results for Self-efficacy**

Variable	Self-efficacy			
	Model 1	Model 2	Model 3	Model 4
Age	.10	.10	.11	.12
Gender	-.03	-.03	-.03	-.03
Education	.05	.04	.02	.02
LMX	.42***	.27**	.28**	.28**
<u>Main effects</u>				
LMXSC		.25**	.23**	.25**
SCO			.11	.08
<u>Moderation</u>				
LMXSC * SCO				.13+
Overall <i>F</i>	10.04***	10.00***	8.73***	8.02***
<i>R</i> <sup>2</sup>	.21	.25	.26	.27
$\Delta F$		7.99**	2.43	3.01+
$\Delta R^2$		.04	.01	.02

*Note.* N = 159. All variables were centered at their means. Figures indicate standardized regression coefficients. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison. SCO = social comparison orientation.

+ $p < .1$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 5. Multiple Regression Results for Felt obligation**

Variable	Felt obligation			
	Model 1	Model 2	Model 3	Model 4
Age	.01	.01	-.03	-.03
Gender	-.06	-.06	-.06	-.06
Education	.05	.04	.07	.07
LMX	.46***	.32***	.23**	.23**
<u>Main effects</u>				
LMXSC		.25**	.28**	.29**
EXID			-.27***	-.27***
<u>Moderation</u>				
LMXSC * EXID				.03
Overall <i>F</i>	11.82***	11.60***	13.02***	11.14***
<i>R</i> <sup>2</sup>	.24	.28	.34	.34
$\Delta F$		8.46**	14.87***	.22
$\Delta R^2$		.04	.07	.00

*Note.* N = 159. All variables were centered at their means. Figures indicate standardized regression coefficients. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison. EXID = Exchange Ideology.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Figure 2. The Interaction Effects of LMXSC and Social Comparison Orientation**



*Note.* SCO = Social Comparison Orientation.



**Table 6. The Summary of Hypothesis Testing**

	Hypothesis	Result
H1	LMXSC is positively related to self-efficacy.	<i>Supported</i>
H2a	Self-efficacy is positively related to (a) task performance.	<i>Supported</i>
H2b	Self-efficacy is positively related to (b) OCBs.	<i>Supported</i>
H3a	Employee's self-efficacy mediates the positive relationship between LMXSC and task performance.	<i>Supported</i>
H3b	Employee's self-efficacy mediates the positive relationship between LMXSC and OCBs.	<i>Supported</i>
H4	LMXSC is positively related to felt obligation.	<i>Supported</i>
H5a	Felt obligation is positively related to (a) task performance.	<i>Unsupported</i>
H5b	Felt obligation is positively related to (b) OCBs.	<i>Supported</i>
H6a	Employee's felt obligation to supervisor mediates the positive relationship between LMXSC and (a) task performance.	<i>Unsupported</i>
H6b	Employee's felt obligation to supervisor mediates the positive relationship between LMXSC and (b) OCBs.	<i>Unsupported</i>
H7	The positive relationship between LMXSC and felt obligation will be stronger for the employees with strong exchange ideology than weak exchange ideology.	<i>Unsupported</i>
H8	The positive relationship between LMXSC and self-efficacy will be stronger for the employees with strong social comparison orientation than weak social comparison orientation.	<i>Supported</i>

## VI. DISCUSSION

A countless number of studies have contributed to broaden our knowledge on LMX (Graen & Uhl-Bien, 1995; Gestner & Day, 1997, Ilies et al., 2007). However, only a handful of researches have focused on LMX in social context. Thus, to put more weight on the research stream investigating relative LMX in social environment, this study was initiated to discover *how* and *when* the perception of relatively high LMX affects individuals' job performance. In a broad sense, our empirical findings supported the general presumption that LMXSC has a significant and positive effect on psychological and behavioral outcomes beyond the effect of LMX supporting the former study (Vidyarthi et al., 2010). However, one needs to be cautious when interpreting the results in that LMX still had substantial explanatory power in most cases, while LMXSC played significant role depending on variables.

### 6.1. The Summary of Hypotheses Testing

Drawing on social exchange (Blau, 1964) and social comparison theory (Festinger, 1954), we assumed that LMXSC may positively affect the follower's felt obligation and self-efficacy. Indeed, our findings supported that one with high LMXSC is more likely to feel obliged to reciprocate for the supervisor and to have positive expectation on the self than the one with low LMXSC. Objective LMX had still independent effect on both mediators, however, the effect of LMX was

reduced when LMXSC was considered. This result is in consonance with Vidyarthi et al. (2010)'s prediction that LMX plays as a base line for the additional effect of LMXSC.

Also, self-efficacy had strong and significant effects on both types of job performance; task performance and OCBs. This is meaningful in that although self-efficacy is the result of self-evaluation and job performance was evaluated by totally independent evaluator (i.e. supervisor), the one with high self-efficacy showed obviously higher level of in-and extra-role performance behavior. That is, the belief that they will be successful in fulfilling duties and responsibilities (Gardner & Pierce, 1998) has indeed been realized into behavioral outcomes. On other hand, felt obligation was not related with task performance, but only with OCBs. However, this unexpected result accompanies with possible explanation. According to the result, even the employee feels that they 'have to' pay back with better task performance, for several reasons this motivation could not be changed into behavioral outcome which can be observed by the supervisor. First reason is that the obliged employee might lack of confidence or work-related ability to achieve higher task performance. In that case, the employee likely to choose the other option to reciprocate (i.e. OCBs) since citizenship behaviors does not require any skills and knowledge. Second, the environmental factors may hinder the employee's task performing. For example, due to the low job autonomy, the employee may not try better work procedure even though he or she wants to. Also, in this case, the employee is likely to increase citizenship behaviors because it

allows wider discretion in action.

The one major purpose of this study was to investigate two coexisting mechanisms through which the perception of relative high LMX with supervisor affects focal employees' job performance. As predicted, self-efficacy partially mediated the relationship between LMXSC and two types of job performance. However, felt obligation was failed to predict job performance level when other main factors are considered together. This finding provides an interesting implication that the one who feels closer to the leader will show better performance mainly because he or she believes own competency at work rather than because the one feel the necessity of reciprocation.

The other purpose of this study was to find individuals factors that might moderate the relationship between LMXSC and two mediators. The assumed moderating role of exchange ideology between LMXSC and felt obligation was not supported. Although it was marginal, the significant moderating role of social comparison orientation between LMXSC and self-efficacy was observed. Supporting our assumption, the employee with high social comparison orientation reacted to LMXSC with higher level of job performance than those with low social comparison. Since self-enhancing effect of social comparison information was identified again, it will be a valuable extension to find organizational and individual factors that might enhance this effect. For example, the individuals with inherently have negative view on self (e.g., high neuroticism) may take more benefits from perceiving relatively higher standing in LMX.

## 6.2. Theoretical Implications

Our findings provide some valuable theoretical implications. First of all, this study showed the empirical support for the validity of LMXSC as meaningful variable distinct from LMX, contributing to emerging literature on LMX differentiation (Henderson et al., 2009; Hu & Liden, 2013). This is meaningful step forward given that the majority of existing LMX literature has almost neglected the effect of LMX embedded in social context (Henderson et al., 2008). In line with Vidyarthi et al. (2010)'s findings, our study successfully captured employee's subjective perception of standing of LMX within social context and its effects on behavioral outcomes. Especially, our findings demonstrated that when individuals recognize their relatively high standings in distribution of LMX, they likely to show more citizenship behaviors than when they only recognize absolutely high level of LMX. Erdogan and Bauer (2015) in their review said "perhaps the most promising of the new measures of LMX is the LMXSC, which has been shown to explain variance in outcomes beyond LMX per se." These scholars also admit the silent effect of LMX as observed in our study. However, despite this, it is indisputable that social comparison approach in LMX literature will play a pivotal role in the future.

Second, we answered the call for examining underlying mechanisms between relative LMX and outcome variables (Hu & Liden, 2013, Vidyarthi, 2010) by investigating the psychological mediators. It deserves mention that, between

two mediating processes, LMXSC has been found to be more strongly related to self-efficacy than felt obligation. This finding gets well along with earlier theory and studies on social comparison phenomenon. Hu and Liden (2013) predicted that comparing oneself with worth-off others may help form a positive self-concepts. And Lyubomirsky and Ross (1997) referred this 'hedonic' consequence of social comparison. Lastly, we assumed dual mediating role of felt obligation and self-efficacy. On the while, the mediating effect of felt obligation was statistically less evident compared to self-efficacy. This implies that incorporating psychological factors regarding another important target of which employees concern, organization, would be valuable exploration. For example, Henderson et al. (2008) posited that psychological contract fulfilment with organization mediates the effect of RLMX on in- and extra-role performance. Likewise, high LMXSC may lead to behavioral outcomes, through employees' positive attitude towards organization such as organizational commitment.

Third, we shed light on the moderating factors which may shape the effect of LMXSC on employees' psychological states. The results of investigation of exchange ideology and social comparison orientation contributes to some extant for each literature. Unlike our expectation, the hypothesized moderating role of exchange ideology between LMXSC and felt obligation was not supported in this study. Originally, Eisenberger et al. (1986, 2001) devised the concept of exchange ideology to demonstrate individual differences degree to which how sensitively they response to reciprocity rules. In this sense, exchange ideology is supposed to

be related to negative attitudes or behaviors only when high exchange ideology individual experiences negative treatment in social exchanges such as LMX and exchange ideology itself need not be related to either positive or negative consequences. However, in our empirical analysis, exchange ideology was directly and significantly related to low felt obligation and, as well, low level of both job performance regardless of how well they are treated from the leader (see Table 1). This result implies that individuals who scored high in exchange ideology measure are likely to be just 'selfish' ones who take their own and give back less, rather than to be more sensitive people toward the norm reciprocity. In this line, Takeuchi et al. (2011) also reported the negative main effect of exchange ideology on felt obligation toward the organization which ends in lower task performance. These empirical findings imply that exchange ideology has changed to be a negatively framed variable being far from original intention to tap the sensitivity level. Therefore, unlike our expectation, exchange ideology seemed to have strong main effect rather than to be a moderator. We recommend future researchers to use the measure such as equity sensitivity (Miles, Hatfield, & Huseman, 1989) to successfully tap the individual differences in reacting to subject perception of relative LMX standings.

On the other hand, we could find the moderating effect of social comparison orientation. As expected, high social comparison orientation basically has shown the tendency to response intensely toward social comparison information from LMXSC. Therefore, it has been clear that there exist individual

differences in the extent to which people accept and utilize such information. Furthermore, prior studies mostly focused on enhancing effect of social comparison effect on the negative outcomes such as antisocial behaviors (Thau et al., 2007) or feeling of contempt (Tse et al., 2013). On the other hand, our result has found that social comparison orientation may have boosting effect on positive social cue and psychological outcomes.

### **6.3. Practical Implications**

Our finding provides some useful implications for leaders. Researches in LMX differentiation suggested negative effect on teams at group level because unequal distribution of resources and attention may cause the feeling of injustice or jealousy (Hooper & Martin, 2008; Tse et al., 2013). On the contrary, our finding has shown that the differentiated standing of LMX may have positive influence on members at individual level through enhancing the perceiver's self-efficacy. Therefore, it is tough but essential task for leaders to exactly recognize effects of differentiation at both group and individual level. Huang, Shi, Xie, and Wang (2015) illustrated the double-edged sword effect of differentiation that, while higher LMXSC can lead to positive consequence, lower LMXSC might trigger retaliation. However, given that each members in organization plays varying roles, it is inevitable for leaders to form differentiated relationships with members (Liden, Erdogan, Wayne, & Sparrowe, 2006). As Kristof-Brown et al. (2005) asserted, of



importance is how the employees perceive the situation rather than their actual position in LMX. Therefore, identical situation for the leader is that making each members believe that they possess high LMXSC. For example, this can be achieved by the leader if he or she frequently show personal consideration for the target member with not being noticed by other members. Furthermore, this study suggests that a certain type of employees may get more benefits from perceiving better LMXSC. Skillful managers may adopt this idea by giving more considerate attention the followers who seems to lack of task-related confidence and proactive attitudes since the boost up effect of LMXSC on self-efficacy may work more strongly for these followers.

## **6.4. Limitations and Directions for Future Research**

The great advantage of the research method used in this study is that we collected the data from two independent sources: the leader and the follower. Although this method lessened the possibility of critical common method bias, we measured independent and mediating variables from the same survey. This may cause confusion in interpreting the causal directions among research variables. For example, highly self-efficacious individual can more likely to perceive or form better LMXSC. Therefore, future study needs to consider a longitudinal research design to further identify the causal relationship.

Some may concern the high correlation between LMX and LMXSC. Many issues in the behavioral science are inaccessible in intact experiments and can only be observed as they occur in nature. In nature, factors that affect the dependent factor Y are generally correlated (Cohen, Cohen, West & Aiken, 2013). It is inevitable phenomenon considering the definition of both constructs. The measure of LMXSC taps positive evaluation of one's standing in LMX and thus contains the phrases of downward comparison in its items. Accordingly, if basically LMX is not high, such downward comparison with others may not occur. For this reason, high correlation was observed in prior LMXSC studies as well ( $r=.55$  in Vidyarthi et al., 2010). However, it does not entirely negate the validity of LMXSC study because, from the outset, LMXSC was introduced to explain unveiled part of LMX literature, not to replace it. Vidyarthi et al also admitted the influence of LMX and thus called future studies to find situational and individuals' traits when LMXSC takes larger explanatory power from LMX. Furthermore, the interest of scholars on LMXSC is emerging very recently. Few studies in proceeding will be published in a couple of years, still the number of published articles are very small, causing difficulties for us to deal with some methodology and statistical issues. For example, due to significant semantic and statistical relationship between LMX and LMXSC, Vidyarthi et al., posited partial role of LMXSC. On the other hand, recently peer-reviewed work of Huang et al. (2015) did not considered or contained LMX in their model while identifying the effects of LMXSC on organizational deviance. This study, compared to Huang et al. (2015), takes more conservative approach by

unveiling the effect of LMXSC after controlling the effect of LMX, which may relieve the concern of high correlation issues. However, far more empirical evidence needs to be accumulated to establish the boundary and relationship between LMX and LMXSC.

Future research in LMXSC literature is also required to find potential moderators between LMXSC and two mediators. Many a scholars agree on the idea that certain types of employees may respond more or less favorably to differentiation in LMX (Henderson et al., 2008). In this line, investigating moderating of well-established individual differences such as Big 5 traits or goal orientation will be interesting way.

Lastly, we assumed dual mediating role of felt obligation and self-efficacy. This reflects our speculation that the perception of high LMXSC may affect employee's psychological states toward the supervisor (felt obligation) and oneself (self-efficacy). Although the hypotheses were moderately supported, mediating effect of felt obligation was statistically less evident compared to self-efficacy. This implies that incorporating psychological factors regarding another important target of which employees concern, *organization*, would be valuable exploration. For example, Henderson et al. (2008) posited that psychological contract fulfilment with organization mediates the effect of RLMX on in- and extra-role performance. Likewise, high LMXSC may lead to behavioral outcomes, through employees' positive attitude towards organization such as organizational commitment.

## **6.5. Conclusion**

Among the series of new approaches in LMX after the millennium (Henderson et al., 2008; Hooper & Martin, 2008), Erdogan and Bauer (2015) pinpointed LMXSC as the most promising area. Since for most individuals, perceived standings seems to be more significant than just absolute taking of desired resources and attention from leader (Erdogan & Bauer, 2015). Although not all hypotheses were supported, this study provided some insightful findings on the role and effect of LMXSC accompanying with the empirical evidence. Social comparison is the inherent nature of human beings and we all are exposed to it during the long day of working with others. Therefore, based on this study and forthcoming studies, we hope social comparison phenomenon get into the boundary of organizational behavior researches.

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## APPENDIX

### <Employee-rated Questionnaire>

*LMX* (see Graen & Uhl-Bien, 1995)

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1. Do you know where you stand with your leader. . do you usually know how satisfied your leader is with what you do?
  2. How well does your leader understand your job problems and needs?
  3. How well does your leader recognize your potential?
  4. What are the chances that your leader would use his/her power to help you solve problems in your work?
  5. What are the chances that he/she would "bail you out," at his/her expense?
  6. I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so
  7. How would you characterize your working relationship with your leader?
- 

*LMXSC* (see Vidyarthi, Anand, Liden, Erdogan & Ghosh, 2010)

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1. I have a better relationship with my manager than most others in my work group
  2. When my manager cannot make it to an important meeting, it is likely that s/he will ask me to fill in
  3. Relative to the others in my work group, I receive more support from my manager
  4. The working relationship I have with my manager is more effective than the relationships most members of my group have with my manager
  5. My manager is more loyal to me compared to my coworkers
  6. My manager enjoys my company more than he/she enjoys the company of other group members
-

*Self-efficacy* (see Chen, Gully, Eden, 2001)

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1. I will be able to achieve most of the goals that I have set for myself.
  2. When facing difficult tasks, I am certain that I will accomplish them.
  3. In general, I think that I can obtain outcomes that are important to me.
  4. I believe I can succeed at most any endeavor to which I set my mind.
  5. I will be able to successfully overcome many challenges.
  6. I am confident that I can perform effectively on many different tasks.
  7. Compared to other people, I can do most tasks very well.
  8. Even when things are tough, I can perform quite well.
- 

*Felt obligation* (see Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001)

---

1. I feel a personal obligation to do whatever I can to help the ~ achieve its goals.
  2. I owe it to the ~ to give 100% of my energy to ~'s goals while I am at work.
  3. I have an obligation to the ~ to ensure that I produce high-quality work.
  4. I owe it to the ~ to do what I can to ensure that ~ customers are well-served and satisfied.
  5. I would feel an obligation to take time from my personal schedule to help the ~ if it needed my help.
  6. I would feel guilty if I did not meet the ~'s performance standards.
  7. I feel that the only obligation I have to the ~ is to fulfill the minimum requirements of my job (reversed)
-

*Exchange Ideology* (see Eisenberger, Armeli, Rexwinkel, Lynch & Rhoades, 2001)

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1. Employees should not care about the organization that employs them unless that organization shows that it cares about its employee
  2. An employee who is treated badly by a company should work less hard
  3. An employee should only go out of their way to help their organization if it goes out of its way to help them
  4. An employee's work effort should depend partly on how well the organization deals with his or her desires and concerns
  5. An employee should only work hard if his or her efforts will lead to a pay increase, promotion, or other benefits
  6. Even if an organization does not appreciate an employee's efforts, the employee should still work as hard as he or she can. (reversed)
  7. An employee should work as hard as possible no matter what the organization thinks of his or her efforts. (reversed)
  8. An employee's work effort should not depend on the fairness of his or her pay. (reversed)
- 

*Social Comparison Orientation* (see Schneider & Schupp, 2014)

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1. I always pay a lot of attention to how I do things compared with how others do things
  2. I often compare how I am doing socially (e.g., social skills, popularity) with other people
  3. I am not the type of person who compares often with others. (reversed)
  4. I often try to find out what others think who face similar problems as I face.
  5. I always like to know what others in a similar situation would do.
- If I want to learn more about something, I try to find out what others think about it
-

### <Supervisor-rated Questionnaire>

*Task Performance* (see Ashford, Lee, & Bobko, 1989)

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1. The performance level of this employee is satisfactory,
  2. This employee is effective in his or her job
  3. This employee performs better than many other employees who perform the same job
  4. This employee produces high-quality work
- 

*Organizational Citizenship Behaviors* (see Lee & Allen, 2002)

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1. Help others who have been absent.
  2. Willingly give your time to help others who have work-related problems.
  3. Adjust your work schedule to accommodate other employees' requests for time off.
  4. Go out of the way to make newer employees feel welcome in the work group.
  5. Show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.
  6. Give up time to help others who have work or non-work problems.
  7. Assist others with their duties.
  8. Share personal property with others to help their work.
  9. Attend functions that are not required but that help the organizational image.
  10. Keep up with developments in the organization.
  11. Defend the organization when other employees criticize it.
  12. Show pride when representing the organization in public.
  13. Offer ideas to improve the functioning of the organization.
  14. Express loyalty toward the organization.
  15. Take action to protect the organization from potential problems.
  16. Demonstrate concern about the image of the organization.
-

## 국 문 초 록

# 상대적 LMX의 질(LMXSC)이 구성원의 직무성과 에 미치는 영향과 메커니즘에 관한 연구

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마 성 혁

주변 사람들과의 사회적 비교를 통하여 자신의 지위와 정체성을 찾아가는 것은 인간이 사회생활을 영위함에 있어서 발생하는 필연적인 현상이다. 이러한 사실에도 불구하고, 기존의 상사와 구성원간 교환관계(Leader-member exchange, 이하 LMX) 문헌에서는 한 명의 상사가 동시에 여러 구성원들과 사회적 교환관계를 형성함으로써 인해 발생하는 구성원들간 사회적 비교 현상과 그 효과에 대한 연구는 거의 이루어지지 않았다. 이러한 이론적 공백을 메꾸고, 상사와 부하간 관계에 대한 보다 현실적이고 온전한 이해를 위하여, 본 연구에서는 사회적 비교를 통해 인식한 ‘상대적 LMX의 질’(Leader-member exchange social comparison, 이하 LMXSC)이 구성원에게 미치는 효과와 그 메커니즘에 대하여 연구한다. 근래에 소개된 개념인 LMXSC는 자신과 상사와의 관계의 질이 동료들의 그것들과 비교하여 어느 정도 우호적인지 대한 인식을 측정하고, 그 효과를 확인하는 것을 목적으로 한다. 사회적 비교 현상에 관한 고전이론과 다수의 실증연구들은 이처럼 사회적 비교를

통하여 인식된 LMX가 단순히 상사와 부하 사이의 절대적 LMX의 효과 이상으로 구성원들의 태도와 행동에 영향을 줄 것으로 예측한다. 특히, 본 연구에서는 다른 구성원들보다 높은 수준의 상대적 LMX의 질을 인식한 구성원은 상사에 대한 보답의 의무감을 느끼고, 더 높은 자존감을 경험하며, 결과적으로 이 두 심리적 요인은 향상된 수준의 직무성과와 조직시민행동으로 이어질 것으로 예상된다. 더불어, 선행연구들은 사회적 교환 관계와 사회적 비교에 반응하는 정도에 개인차가 존재함을 밝힌 바 있다. 따라서, 본 연구에서는 LMXSC의 효과가 두 가지 개인적 요인- 교환 이데올로기와 사회적 비교성향-에 의하여 조절되는지 여부를 탐색한다.

본 연구는 국내의 다양한 산업에 종사하는 163개의 상사-구성원 쌍을 대상으로 한 설문조사 결과를 통하여, 앞서 가정한 가설들을 실증적으로 분석 및 검증하였다. 이 데이터를 바탕으로 한 위계적 회귀분석 결과에 따르면, LMXSC는 LMX의 효과를 통제된 이후에도 구성원이 느끼는 상사에 대한 의무감과 자존감에 유의미하게 긍정적인 영향을 미치는 것으로 밝혀졌다. 구성원들의 자존감은 다시 상사가 평가한 직무성과와 조직시민행동 수준을 높이는 것으로 나타났으며, 상사에 대한 의무감은 조직시민행동과만 유의미한 상관관계를 나타내었다. 매개 메커니즘에 대한 분석 결과는 LMXSC가 직무성과와 조직시민행동에 미치는 효과가 구성원의 자존감에 의하여 부분매개됨을 나타내었다. 기대한 바와 달리 상사에 대한 의무감의 매개효과는 지지되지 않았다. 마지막으로, 사회적 비교 성향이 강한 구성원들에게 LMXSC가 자존감에 미치는 영향이 더 큰 것으로 밝혀졌으며, LMXSC와 상사에 대한 의무감 사이의 교환 이데올로기의 조절효과는 확인되지 않았다.

본 연구는 기존의 상사-구성원 양자간 접근법에서 나아가 사회적



시각에서 LMX를 연구하였다는 점에서 중요한 의의를 지닌다. 특히, 본 연구는 LMXSC가 LMX의 영향을 넘어서 구성원들의 직무성과를 향상시키는 효과와 메커니즘에 대한 실증적 증거를 제공해주었다. 이러한 발견은 즉, 남들보다 더 좋은 상사와의 관계를 인식하는 것은 단순히 상사와 우호적인 관계를 형성하는 것 이상의 긍정적인 효과를 가져올 수 있다는 점을 시사한다. 또한, 구성원의 개인적 특성에 따라 LMXSC의 효과가 달라질 수 있다는 연구결과는 다양한 유형의 휘하 구성원들을 다루어야 하는 관리자들에게 실무적인 시사점을 제공할 것이다. 따라서, 연구자는 본 연구를 통하여 더 많은 연구자들이 이러한 상대적 LMX의 인식과 효과에 대하여 관심을 갖고 연구함으로써 국내외에서 사회적 맥락에서의 LMX 연구의 저변이 확대되기를 기대한다. 연구의 결과에 대한 학술적, 실무적 시사점과 연구의 한계, 그리고 향후 연구에 대한 제언이 함께 논의된다.

**주요어:** 상대적 LMX의 질(LMXSC), 사회적 비교, 자존감, 의무감,  
사회적 비교 성향, 직무성과

**학번:** 2014-20450



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경영학석사학위논문

**A Study on the Effect and Mechanism of  
Leader-Member Exchange Social Comparison  
(LMXSC) on Job Performance**

상대적 LMX의 질(LMXSC)이 구성원의 직무성과에  
미치는 영향과 메커니즘에 관한 연구

2016년 2월

서울대학교 대학원

경영학과 경영학전공

마 성 혁

**A Study on the Effect and Mechanism of  
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지도교수 윤 석 화

이 논문을 경영학 석사학위논문으로 제출함

2015년 12월

서울대학교 대학원  
경영학과 경영학전공  
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마성혁의 석사학위논문을 인준함  
2015년 12월

위 원 장 \_\_\_\_\_ (인)

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위 원 \_\_\_\_\_ (인)

## **ABSTRACT**

# **A Study on the Effect and Mechanism of Leader-Member Exchange Social Comparison (LMXSC) on Job Performance**

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Social comparison is an essential nature of human social life. Despite this nature, earlier research on leader-member exchange (LMX) has largely neglected the effect of social comparison among work group members by taking dyadic and isolated approach on LMX. To overcome such deficiency in the literature and to gain more realistic and intact picture of social exchanges between leader and member, this study investigates the effect and mechanism of Leader-Member Exchange Social Comparison (LMXSC) on employees. The recently introduced concept of LMXSC aims to measure how the focal employee perceives one's relative standing of LMX compared to those of others. A well-established theory and numerous researches on social comparison imply that socially compared LMX

may affect employee's attitudes and behaviors beyond the effect of objective LMX. Especially, this study suggests that the one who perceives the better standing in LMX than others (i.e. high LMXSC) may experience felt obligation toward the leader and enhance self-efficacy, both of which, in turn, result in better job performance; task performance and organizational citizenship behaviors (OCBs). Furthermore, previous researches suggest that individuals differ in response toward social exchange and social comparison. Based on this, we further explore when the effect of LMXSC is strengthened by proposing two possible moderators; exchange ideology and social comparison orientation.

A sample of 163 leader-member dyads working in diverse industries in South Korea was collected and analyzed for empirical testing of hypotheses. The hierarchical regression results have shown that LMXSC had a significantly positive effect on both felt obligation and self-efficacy even after controlling LMX. Employee's self-efficacy was related to supervisor-rated task performance and OCBs, whereas felt obligation was only related to OCBs. The test of mediating mechanism unveiled that the effects of LMXSC on the two types of job performance were partially mediated by self-efficacy. However, unexpectedly, the mediating role of felt obligation was not found. Lastly, as supposed, LMXSC was found to affect the employee's self-efficacy whose social comparison orientation is high rather than low. However, the moderating effect of exchange ideology between LMXSC and felt obligation was not found.

Generally, this study provides a meaningful step forward in LMX literature in

that it goes beyond a classical dyadic approach. Especially, we provided empirical evidence for the effect and underlying mechanism of LMXSC which benefits employee's job performance. In other words, our findings suggest that the perception of *better* standing in LMX obviously has more advantages than simply recognizing a *good* relationship with the leader. We expect more extensive researches on this implication to be conducted in the future. The implications and limitations of this study as well as directions for future studies are also discussed in detail.

**Key words:** LMX social comparison, social comparison, self-efficacy, felt obligation, social comparison orientation, job performance

**Student Number:** 2014-20450

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# **I . INTRODUCTION**

Over the past several decades, scholars have amassed a significant body of research on leader-member exchange (LMX). While classical leadership theories assume that leader exerts homogeneous influence on the members within work group (Graen & Uhl-Bien, 1995), LMX theory suggests the differentiated interpersonal relationships where leaders establish low-quality, transactional relationships with some and, at the same time, establish high-quality, socioemotional relationships with others (Dansereau, Graen, & Haga, 1975). A voluminous body of research has proved that employees who engage in high quality of LMX feel an obligation to reciprocate to their leaders and organizations with positive work attitudes (Erdogan & Liden, 2002; Harris, Wheeler, & Kacmar, 2009; Liden, Sparrowe, & Wayne, 1997) and better performance (Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007; Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012).

Despite these valuable findings, research on LMX to date has an important limitation in that the majority of research considered focal LMX relationships in isolation from those of coworkers (Sparrowe & Liden, 1997, 2005), ignoring the fact that that LMXs are naturally embedded within the broader social context of work groups (Hu & Liden, 2013). This deficiency in literature put forwarded the new stream of LMX research examining LMX from the perspective of social context rather than isolated, dyadic context (Henderson, Wayne, Shore, Bommer, & Tetrick, 2008; Herman, Dasborough, & Ashkanasy, 2008; Vidyarthi, Liden, Anand, Erdogan, & Ghosh, 2010).

Based on differentiation which is core tenet of LMX theory, this new research emphasizes on exploring social comparison process within group induced by

differentiation. In other words, the differential quality of LMX relationships prompt members to engage in implicit comparison that may enable focal employee to be aware of her or his relative standing in a workgroup. Therefore, an employees' evaluation of own *relative* standing of LMX relationship may shape work attitudes and behaviors in work place (Henderson et al., 2008; Hu & Liden, 2013; Vidyarathi et al., 2010). To prove the effects of relative LMXs, two useful constructs have been introduced. First, Henderson et al. (2008) termed *relative LMX* (RLMX) which means objective relative LMX standing, operationalized by subtracting the group mean of LMX from individual LMX. Following this, Vidyarathi et al. (2010) developed *LMX social comparison* (LMXSC) which refers to subjective or perceptual ratings by focal employees of their relative LMX standing. Although the concept of RLMX has been more frequently utilized by scholars (Li, Liu, Fang, & Wu, 2014; Epitropaki & Martin, 2013; Hu & Liden, 2013), LMXSC deserves more attention for several reasons. First, subjective perceptions of environment has been found to be more influential than real environment (Kristof-Brown, Zimmerman, & Johnson, 2005). That is, perceived standing (LMXSC) may act more proximal antecedent of attitudes and behaviors than the real standings (RLMX) (Vidyarthi et al., 2010; Anand, Vidyarthi, & Park, 2015). Second, especially regarding social comparison process, it is important that the perceiver may not attain or use the entire information of all LMX standings of others. Therefore, LMXSC can differ from RLMX which is driven from calculation with all LMX data in social group. In this regard, Thomas, Martin, Epitropaki, Guillaume and Lee (2013) said that LMXSC is "a more direct measure of the social comparison process as perceived through the eyes of the

beholder." Aforementioned two pioneering studies on relative LMX (both objective and subjective) have demonstrated that individuals' LMX standings among coworkers have a positive influence on their in-role and extra-role performance (i.e. organizational citizenship behavior, OCB) beyond the effect of dyadic LMX alone (Henderson et al., 2008; Vidhyarthi et al., 2010). However, the knowledge of why and when the relative LMXs shape employees' attitudes and behaviors is far less clear. Specifically, no research has been conducted to identify the underlying psychological mechanisms through which the subjective judgment of one's own LMX standing leads to positive outcomes.

Answering for the request to fill up theoretical deficiency by Hu and Liden (2013) and Vidhyarthi et al. (2010), this study mainly focuses on examining underlying mechanisms between LMXSC and job performance. We consider employees' *self-efficacy*, belief in one's capabilities to accomplish tasks (Bandura, 1982), and *felt-obligation*, belief in whether one should care about the organization (or leader)'s well-being and should help organization (or leader) reach the goals (Eisenberger, Ameli, Rexwinkel, Lynch, & Rhoades, 2001) as two primary psychological processes that convey the effect of LMXSC on individual outcomes. This dual mechanism model has unique value in LMX and LMX differentiation literature. Wang, Law, Hackett, Wang, and Chen (2005) commented that if the follower feels receiving leaders' recognition and praise, these in turn (1) nourish the follower's sense of self-worth and (2) felt obligation to reciprocate, thereby motivating behaviors that serve this obligation. However, to our knowledge, none of studies explained these two mechanism together. Some scholars

asserted that social exchange brings benefits based on the norm of reciprocity, which make workers feel obliged to exert more effort on tasks (Wayne, Shore, & Liden 1997; Wilson, Sin, & Conlon, 2010). However, this does not explain how employees can attain self-confidence and belief in themselves leading better task achievements. On the other hand, other scholars found that the better treatment from the leader increases employee's self-worth (Deci, Connel, & Ryan, 1989; Keller & Dansereau, 1995). However, this may not explain why employees need to use such increased self-belief for their leaders and organizations. In sum, each mechanism explains employee's reactions to favorable treatment by the leader, but it could be at most partial explanation. Thus, this study poses two mechanisms simultaneously suggesting that employees who feels relatively closer to the leader will show positive job performance since they likely to believe their competency(self-efficacy) in task as well as they need to reciprocate (felt obligation).

Furthermore, ignoring the boundary conditions when assessing the effects of relative LMX may provide only the narrow picture of LMXSC (Hu & Liden, 2013). Hence, we also explore the boundary conditions of employee characteristics which may moderate the effect of LMXSC. Recently, researchers have started examining how and why a certain types of employees respond with different degrees to exchange relationships in social context (Hochwarter, 2005; Kamdar & Van Dyne, 2007). Along with this line, we suggest possible moderating factors that may shape the linkages between LMXSC and job performance through self-efficacy and felt obligation.

In a nutshell, this study dedicates to uncover how and for whom the perception of relative standing of LMX plays a pivotal role in job effectiveness at work. For this, we

suggest and verify the dual underlying mechanism between LMXSC and job performance considering employee's self-efficacy and felt obligation as two mediators. Second, the individual factors that may shape the linkage between LMXSC and each mediators will be identified. Although social comparison is regarded as universal and inevitable element in social life, research that integrates social comparison with organizational phenomena has been lacking (Greenberg, Ashton-James, & Ashkanasy, 2007). Through a comprehensive approach incorporating mediators and moderators, this study will help us to draw an intact picture of social comparison that happens on a daily basis among leaders and their subordinates.

## II . THEORETICAL BACKGROUND

### 2.1. LMX and LMX Differentiation

Extant research has found that leader-member exchange (LMX), or dyadic relationship between supervisor and subordinate, has significant influence on subordinate attitudes and behaviors (Harris, Li, & Kirkman, 2014; see Ilies et al., 2007 for review). The underpinning assumption of LMX theory is that leaders develop distinctive quality of LMXs with multiple members in work groups or social groups (Liden & Graen, 1980). Yet, the majority of LMX studies has operationalized and measured LMX in absolute terms of independent dyads (supervisor-subordinate) ignoring the reality that LMX is basically embedded within broader social context of work groups. In other words, a dyadic approach has significant limitation in that it cannot capture the variability of LMXs and its effects in social group. The earlier researchers found that leaders establish differentiated exchanges with their members in 90 percent of the time (Liden & Graen, 1980). Subsequent empirical studies have also shown that differentiated LMXs predominantly exist within the team context (Erdogan & Baur, 2010; Hu & Liden, 2013).

Acknowledging such pervasiveness and potential implication of differentiating phenomenon, recent scholars have established a new approach conceptualizing *LMX differentiation*, which refers to within-group variation in the quality of LMX (Kauppila, 2015). The study of Henderson, Liden, Glibkowski and Chaudhry (2009) served as a great milestone enlarging this new stream of LMX, suggesting the model of antecedents and consequences of LMX differentiation. Concerning the outcomes of LMX differentiation, it still remains unclear whether differentiation is beneficial or detrimental

(Erdogan & Bauer, 2015). On the positive side, Liden, Erdogan, Wayne, and Sparrow (2006) found that LMX differentiation had positive effects on task performance in situation of high task interdependence. Stewart and Johnson (2009) also reported that LMX differentiation led to better team performance when high gender diversity existed. On the other side, Liao, Liu and Loi (2010) found that LMX led to higher self-efficacy and team creativity when low LMX differentiation existed. And many other researchers also suggested that LMX differentiation may induce negative effects on team level because it induces the perception of unfairness in a team context, eroding cooperation and social harmony (Hooper & Martin, 2008). On the while, other researchers have insisted that the linkage between LMX differentiation and detrimental outcomes is contingent on situational factors such as team climate. For example, Erdogan and Bauer (2010) found that LMX differentiation had a negative effect on team members' attitudes, relationships with coworkers only when team justice climate did not exist.

In addition to the predictors and consequences of LMX differentiation, measurement issue is currently on debate. So far, the majority of studies measured LMX differentiation by aggregating individuals' scores into group-level variable by calculating variance or standard deviation of LMXs in group. However, this method of obtaining objective level of LMX differentiation requires an intact sampling of employees within the team. If members with low LMX quality are not included in the sample, the resulted relative LMX figure has only limited validity (Erdogan & Bauer, 2015). On the other hand, researchers such as Hooper and Martin (2008) used a measure tapping perceived level of differentiation. This method has advantages since it does not require entire



sampling and, more importantly, perceived reality can more strongly shape one's attitudes and behaviors than reality (e.g., Kristof-Brown et al., 2005).

To summarize, the concept of LMX differentiation brought our attention to the core tenet of the exchange relationships leaders develop. Some valuable studies have broadened our knowledge on determinants, consequences, and measures of LMX differentiation (Kauppila, 2015; Liao et al., 2010; Henderson et al., 2008; Erdogan & Baur, 2010). However, far more areas remain unexamined. If actual or perceived variation in LMX qualities exists in a team, individuals may consciously and unconsciously compare their own LMXs with others and thus are affected by these relative standings of LMX. This is discussed in more detail below.

### **LMX and social comparison**

As discussed above, the differentiation of within group LMXs is prevalent phenomenon in workplaces (Erdogan & Baur, 2010; Hu & Liden, 2013). Duchon, Green, and Taber (1986) found that individuals can accurately capture the status of relationships their coworkers have with the leader. The presence of LMX differentiation and individuals' ability to gauge others' LMX imply that one can interpret his or her own LMX through social comparison processes (Vidyarthi et al., 2010). According to social comparison theory (Festinger, 1954), people are likely to use social comparison especially to the extent that objective and non-social measuring is not appropriate to use. For own social exchange quality with the leader is not accurately measurable and observable, people are more subjective to social comparison of LMX.

From this insight, a relative but distinct way of examining LMX differentiation has evolved, which is the investigation of the perception of one's individual treatment by the leader in comparison with others (e.g. Henderson et al., 2008; Herman, Ashkanasy, & Dasborough, 2012). Two pioneering studies greatly contributed to this line of research prompting subsequent studies. First, Henderson, Wayne, Shore, Bommer and Tetrick (2008) introduced the concept of relative LMX (RLMX), which refers to one's LMX quality relative to the average LMX quality in a work group. With the empirical data, they found that RLMX led to better performance and more sportsmanship behaviors, which was mediated by the perception of psychological contract fulfilment. Afterward, Vidhyarthi and his colleagues (2010) introduced the concept of LMX social comparison (LMXSC); the subjective comparison between one's own LMX and that of coworkers. They validated this concept by empirically testing that LMXSC had predictive validity on two types of job performance (task performance and citizenship behaviors) beyond the contribution of LMX and RLMX. RLMX and LMXSC are basically similar in that both capture the same phenomenon of how the focal employee's LMX differs from the LMXs of his/her coworkers. The difference lied in that RLMX is objectively obtained by subtracting group LMX mean from individual LMX, whereas LMXSC is directly obtained from the focal employee by surveying one's perception of own relative standing of LMX compared to peers. Although RLMX and LMXSC both are valuable measures to capture relative standing of LMXs, we adopt LMXSC as our focal construct based on several reasons. One limitation with RLMX is its requirement of intact sampling of team members (Erdogan & Bauer, 2015). Even the entire sampling is conducted, it is not

relevant because the focal employee may not reach and use information of LMXs of all group members. Rather, the one likely uses LMXs of those who interact closely and more frequently as referent points. Furthermore, Vidyarthi et al. (2010) explained that though one may base their perception of LMX on RLMX, LMXSC is more proximal constructs toward employee's attitudes and behaviors. This is because subjective perceptions of environment are more influential than real environment (Kristof-Brown et al., 2005). Also, Thomas et al. (2013) regarded LMXSC as "a more direct measure of the social comparison process as perceived through the eyes of the beholder."

Erdogan and Bauer (2015) mentioned that this new approach of LMX differentiation is quite interesting because "being the one *closer* to the leader has advantages that go beyond simply having a close relationship with the leader" (p. 55). Indeed, initial researches implied that those with high relative LMX quality enjoy unique advantages beyond the effects of objective level of LMX and thus engendering differing obligations toward exchange partners (Henderson et al., 2008; Vidyarthi et al., 2010). Existing point of view assumes that once individuals perceive LMX differentiation is present in their teams, they might respond negatively due to the sense of inequity (Uhl-Bien, Graen, & Scandura, 2000). Notwithstanding, the results can be changed when considering LMX differentiation at individual level, rather than group level. Once becoming a beneficiary of higher LMX or perceiving in that way, the focal employee likely responses in a positive way. Hu and Liden (2013) supported this assumption by finding that RLMX enhanced employee's self-efficacy and thus increased job satisfaction and job performance level. In a similar vein, this study will figure out *how* and *when* the

perception of relatively high LMX (LMXSC) positively affects the focal employee's behavior. In addition, we further extend this approach by proposing that certain type of employees will response to LMXSC more strongly. This is following recent researches that have started demonstrating how individuals may respond differentially to perceptions of their exchange relationships (e.g. Kamdar & Van Dyne, 2007).

### **Social Comparison Theory**

Both researches on relative LMX in social context (i.e. RLMX and LMXSC) are rooted in social comparison theory (Festinger, 1954). Wood(1989) defined social comparison as 'the process of thinking about information about one or more other people in relation to the self' (Wood, 1996, p. 520). Hu and Liden (2013) explained three fundamental reasons why people are concerned with others in the workplace: to understand own capability (Festinger, 1954); to gauge the possibility of performing well (Goethals & Darley, 1977); to see whether they are accepted and respected by social group (Darley, 2004). To serve these purposes, individuals constantly endeavor to identify relative standings compared to others, especially with those who are seen as more similar. In this sense, coworkers and their LMXs are relevant targets of social comparison because employees are exposed to the same leader, physical environment, practices on a daily basis and required to interact with each other to fulfill assigned tasks (Stapel & Koomen, 2005).

Social comparison literature shed light on several mechanisms people make comparison. One mechanism is through direct or mediated experience (Bandura, 1986).

Direct experience includes watching coworkers making a conversation with the leader in team meetings. Socially mediated experience can be obtained through various ways such as having informal chatting or hearing rumors (Hu & Liden, 2013). Through these conscious experiencing, individuals can gauge one's relative LMX standing in the team or social group. Surprisingly, social comparison may work through subliminal mechanism (Stapel & Blanton, 2004). That is, information which forms LMXSC can be perceived without awareness (Goethals, 1986). This is possible due to individuals' constant observation of nonverbal signs between coworker and the leader. For example, watching coworkers laughing or smiling with the leader may signal subliminal information on the qualities of coworkers' LMXs, thus shaping observer's LMXSC (Hu & Liden, 2013). This kind of unconscious occasion of social comparison process has been empirically supported by social psychologists (Gilbert, Price, & Allan, 1995; Stapel & Blanton, 2004).

Given this theoretical and empirical findings in social comparison literature, we may conclude that individuals 'inevitably' use social comparison in their social life, especially in the workplace. Thus, it is surprising that social comparisons have been rarely explored in the leadership literature, which is one of the most rigorously studied area in management (Greenberg et al., 2007). Only recently have researchers begun to investigate social comparison embedded within leadership-member relationships. For example, Tse et al.(2013) investigated how the perception of specific coworker's LMX relative toward one's own LMX leads to feeling of contempt and diminished help from coworkers. As this study showed, as our society becomes more competitive environment,

people are getting more sensitive to others' performance and status. Therefore, implications of social comparison happening in diverse areas deserve more examination in the future.

## **2.2. Self-efficacy**

Self-efficacy is one of the most important concepts in contemporary industrial-organizational psychology and organizational behaviors in management field. The initial study of Bandura (1989) which introduced social cognitive theory and its core concept of self-efficacy has been cited more than 40,000 times. This means that virtually all area in organizational research have utilized self-efficacy as a key concept, including area of leadership (Knippenberg, Knippenberg, Cremer, & Hogg, 2004), abusive supervision (Harvey, Stoner, Hochwarter, & Kacmar, 2007), performance evaluation (Bartol, Durham, & Poon, 2001), creative performance (Tierny & Farmer, 2011), pro-sociality (Caprara, Alessandri, & Eisenberg, 2012) and goal orientations (Middleton, & Midgley, 1997). Regarding this broad usage of self-efficacy, Zimmerman and Schunk (2003) described self-efficacy as “pervasive across contexts and domains of human functioning.”

Self-efficacy is originally defined as “people's judgment of their own capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). While the Bandura's definition focused on task-related context, Judge, Locke, Durham, and Kluger (1998) extended this concept to more general situation, conceptualizing *generalized self-efficacy* as individuals' belief in their capability to realize the motivation, cognitive resources, and actions required to meet

situational demands. According to various purposes and contexts of studies, scholars have selectively used either definition of self-efficacy or general self-efficacy with relevant measurements. Since this study focuses on the behavioral outcomes (i.e. job performance) which are valued in organization, we regard the term self-efficacy of Bandura (1986) as more appropriate in this study due to its task-related feature. Within this operationalization, high self-efficacious individuals believe that they will be successful in their own duties and responsibilities (Gardner & Pierce, 1998), while low self-efficacious individuals likely to engage in fewer coping efforts and give up more easily under challenging situations (Gist, 1987).

Scholars have struggled to identify and differentiate highly analogous and often confusedly used constructs on self-related constructs (Bong, Skaalvik, 2003). For the better understanding of the concept of self-efficacy, it deserves to briefly mention other related concepts. What is theoretically and empirically similar with self-efficacy is self-esteem (Gardner & Pierce, 1998). Self-esteem is "the basic appraisal people make of themselves" (Judge et al., 1998). It is reasonable that individuals who think themselves as significant, highly capable and successful in a broad sense (self-esteem) likely have higher expectation of achieving specific tasks (self-efficacy). Thus, these two self-concepts are highly related, but conceptual difference does exist. The study of Gardner and Pierce (1998) well illustrated the differences between self-esteem and self-efficiency. Two concepts differ in their targets (the self vs. the self related to some tasks), time perspectives (present evaluation of the self vs. future expectation of one's performance) and their conceptual closeness toward a belief versus an evaluation (Gardner & Pierce,

1998).

In terms of antecedents that form one's self-efficacy, scholars are consistent with the idea that self-efficacy gradually emerges from specific experiences of personal success (Bandura, 1982; Eden & Kinnar, 1991). For example, Gardner and Pierce (1998) commented that communication about successful achievement such as supervisory feedback is likely to increase employee's feeling of self-efficacy. The meta-analysis of Judge, Jackson, Shaw, Scott, & Rich (2007) found that individual traits such as mental ability, conscientiousness, extraversion and emotional stability were correlated with self-efficacy. However, past experience had a stronger correlation with self-efficacy than those individual traits had. Regarding the consequence of self-efficacy, given its nature of task-focused definition, what has received ample evidence is enhanced task performance (Sadri & Robertson, 1993). Indeed, the meta-analysis of Stajkovic and Luthans (1998) investigated the relationship between self-efficacy and work-relevant performance. Through the examination of 114 studies, they reported significant and positive correlation ( $\rho = .38$ ) between self-efficacy and performance. Furthermore, Bandura (1989) suggested that self-efficacious individuals less likely to experience fear of failure or unhappiness toward efficacy targets (i.e. assigned tasks). This is supported by Judge and Bono (2001) who found that high self-efficacy (generalized self-efficacy in this study) was more strongly related to job satisfaction ( $\rho = .38$ ) than other self-related concepts such as self-esteem, locus of control, emotional stability. Also, self-efficacy works in preventing detrimental attitudes and behaviors. For example, MacNab and Worthley (2007) showed that those with high self-efficacy have the inclination of



whistle-blowing behaviors, implying that one with high self-efficacy likely object to unethical behaviors. On the contrary, low level of self-efficacy are not only related to poor performance but also induce many kinds of psychological harms. Many a prior study on the disadvantages of having lower self-efficacy reported its relationship with higher depression, anxiety, helplessness (Scholz, Dona, Sud, & Schwarzer, 2002), job stress and burn out (Schwarzer, Hallum, 2008).

Considering causal relationships where experiences generated in work-related context shape self-efficacy and, subsequently, lead to important work outcomes, it seems natural that numerous organizational researchers put great attention to mediating role of self-efficacy. Especially with regard to leadership and LMX, self-efficacy has been found to mediate various independent variable including transformational leadership (Salanova, Lorente, Chambel, & Martínez, 2011), ethical leadership (Ma, Cheng, Ribbens, & Zhou, 2013), LMX (Liao et al., 2010), RLMX (Hu & Liden, 2013) and job performance. Likewise, this study poses that exchange relationships with leader and what exchanged through those relationships are relevant predictors of self-efficiency, and that self-efficacy will mediate the relationship between LMXSC and job performance.

### **2.3. Felt-obligation**

When an individual is treated well, the one feels the necessity of reciprocating toward whom provided favorable treatment (Gouldner, 1960). The reason why people intuitively feel such obligation is to maintain the positive self-concept of justice and fairness by repaying appropriately and to avoid negative consequence associated with the violation

of social reciprocity norms (Eisenberger et al., 2001). This norm of reciprocity can be extended to organizational context since workplace consists of visible and invisible exchanges among members and organization. In this sense, Eisenberger et al. (2001) defined felt obligation as “a prescriptive belief regarding whether one should care about organization’s well-being and should help the organization reach its goals.” (Eisenberger et al., 2001)

Felt obligation especially plays a key role in social exchange literature. According to social exchange theory (Blau, 1964), social exchange, unlike economic exchange, incorporates unspecified obligation of mutual reciprocity. Given that, perceiving better treatment through social exchange relationships (e.g., high LMX or high perceived organizational support) positively affects the individual attitudes and behaviors beyond the level of economic contract based on psychological obligatory mechanism. In other words, when employees receive better benefits from leaders, organizations or coworkers, they feel that they need to reciprocate with somewhat valuable, which is usually job performance, citizenship behaviors or helping behaviors. Indeed, Eisenberger et al. (2001) found that perceived organizational support (POS) by employees was positively related to felt obligation to concern about the organization's effectiveness, thus leading to affective commitment and in-role performance. In addition to POS, LMX which is another important social exchanges in organization also posits the mediating role of felt-obligation in its positive effects on employee’s behaviors, but unfortunately not many empirical studies validated this assumption.

Eisenberger et al. (2001)’s conceptualization of felt obligation largely focus on

reciprocal toward ones' organization. However, the concept of felt obligation can be adapted depending on the context of study. For example, it can specify other target of reciprocating behaviors such as felt obligation toward coworkers (Mossholder, Settoon, & Henagan, 2005) or felt obligation for constructive change (Liang, Farh, & Farh, 2012).

In order to identify the mediating role of felt obligation between LMXSC and job performance, we use the felt-obligation toward leader by simply change the target of the organization to the leader. Felt-obligation toward organization may be used as the consequence of perceiving higher relative LMX among coworkers (LMXSC), since supervisor support via high LMXSC is viewed as supportive actions of the organization (Eisenberger et al., 2001). However, we utilize leader-targeted felt obligation because the leader differentiate LMX among workers and thus the recipient likely to have more strong feeling of reciprocation toward the leader rather than the organization.

## **2.4. Exchange Ideology**

With regard to social exchanges between leader and member, one important individual traits that should be considered is exchange ideology (Cropanzano & Mitchell, 2005). Although every individual is inclined to reciprocate for what they received, not all individuals value such reciprocity to the same degrees. *Exchange ideology* captures individual difference in the strength of belief that work effort should depend on the treatment by the organization (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Variance in exchange ideology among individuals can originate from personal past experience, observation through coworkers and communication such as persuasion saying the repayment should be dependent on received value (Eisenberger et al., 2001).

Eisenberger et al. (1986) found that the association between POS and job attitudes (attendance in this study) was higher among teachers who had strong exchange ideology.

An employee with strong exchange ideology put more weight on what they gain than what they give (Coyle-Shapiro & Neuman, 2004). This focus leads to some bias in interpret and respond to organizational context. They tend to have negativity bias which induce them to concentrate on the negative information and experience (Rozin & Royzman, 2001). This bias decreases the possibility and the degree of reciprocal behaviors.

In most studies, exchange ideology was hypothesized and tested as a moderating factor (e.g. Witt, 1991). For example, Witt (1991) investigated the moderating role of exchange ideology on the relationship between job attitudes and OCBs. Scott and Colquitt (2007) found that exchange ideology plays a moderating role on justice – behavioral outcome relationship in work place, and its moderating effects were even stronger than the Big Five personality factors. However, the literature on exchange ideology is in its early stage rather than mature one in that its main effect is not frequently investigated. One exception is Takeuchi, Yun, Wong (2011)'s study which considered exchange ideology's main effects on task performance. Takeuchi and his colleagues found that individuals with strong exchange ideology are less likely feel obligated toward the organization, thus lessening task performance.

## **2.5. Social Comparison Orientation**

Although it is true that social comparison is frequently triggered by external factors,

many a scholars agree on that some react to social comparison more sensitively and others do less across various situations according to their dispositions (Gilbert, Giesler, & Morris, 1995; Steil & Hay, 1997). Based on this arguments and observations, Gibbons and Buunk (1999) operationalized the concept of *social comparison orientation*, which refers to individual tendency to compare various aspects of oneself with those of others (Gibbons & Buunk, 1999). High social comparison orientation features paying more attention to behavior and thought of others. Furthermore, individuals who have high social comparison orientation try to reduce uncertainty on themselves by building self-images based on information attained by comparison with others (Buunk & Mussweiler, 2001). In other words, they likely to experience chronic uncertainty, thus having low self-esteem, high social anxiety and depression.

The literature of social comparison orientation has amassed valuable findings. Many of these findings are conducted in diverse clinical fields in order to find the effects of social comparison orientation on patients suffering from critical diseases. For example, in Van der Zee, Oldersma, Buunk, & Bos (1998)'s study, cancer patients who were high in comparison orientation spent more time with a computer program reading the interviews of others who are in same situation of suffering cancer. However, as research of social comparison broadens toward various fields, social comparison orientation of employees who work in organization is gaining attention from researchers. This arise in literature is unsurprising given that the time employees spend at work and socialized environment within team-based structure. Buunk, Zurriaga, Gonzalez-Roma, and Subirats (2003) reported that those high in social comparison orientation experience heightened feelings

of relative deprivation when engaging in upward comparisons. Thau, Aquiano and Wittek (2007) found that the negative relationship between the employee's perception of interactional justice and their antisocial work behaviors was stronger for those with high social comparison orientation. Especially in LMX literature, Tse et al. (2013) reported that when social comparison orientation is high, an employee likely have a stronger feeling of contempt with the coworker who has similar LMX with oneself. All these prior findings imply that social comparison orientation amplifies the influence of negative cues from social comparison information. On the other hand, the evidence for the role of the orientation when the positive comparison information is received (e.g. LMXSC) has not been proposed and tested. Therefore, in this study, considering the underpinning feature of social comparison orientation, which is tendency to focus on comparison information, we suggest social comparison orientation might moderate the effect of LMXSC. The detail of suggestion will be discussed below.

## **2.6. Job Performance**

Performance valued in organization has multiple dimensions (Campbell, 1999). Researchers and practitioners have acknowledged various types of employee performance which can strengthen organizational effectiveness and viability from more formal and required performance (e.g. task performance) to informal and voluntary performance such as proactive behaviors (Parker, Williams, & Turner, 2006) and knowledge sharing (Bartol & Srivastava, 2002). However, still the dimensions of more importance and frequently studied are two main dimensions of performance: task

performance and organizational citizenship behaviors (OCBs) (Williams & Anderson, 1991; Yun, Takeuchi, & Liu, 2007). Task performance is defined as behaviors "that are directly involved in producing goods or services, or activities that provide indirect support for the organization's core technical processes" (Van Scotter, Motowidlo, & Cross, 2000, p. 526). Finishing assigned task in a timely manner can be a good example of task performance. OCBs, on the other hand, are defined as voluntary behaviors by employees which go beyond the required job description and thus ultimately contribute to organizational effectiveness (Organ, 1988). Although the behaviors like helping other coworkers or working until late are not included as task performance and not rewarded by organizations, they are recognized as citizenship behaviors. In this study, following many prior researchers (Yun et al., 2007; Kamdar & Dyne, 2007; Wang, Law, Hackett, Wang, & Chen, 2005), we investigate both task performance and OCBs to comprehensively catch the effects of our focal constructs on both required and discretionary behaviors.

## **III. HYPOTHESIS DEVELOPMENT**

### **3.1. The Mediating Mechanism of Self-efficacy**

#### **LMXSC and self-efficacy**

People incorporate a rich array of social information into their working self-concepts automatically (Bargh, 1989; Staple & Blanton, 2004). Among various types of self-concepts, self-efficacy, defined as one's belief in capabilities to organize and fulfill the assigned tasks (Bandura, 1986), is relevant in work place due to its focus on task fulfilment. Within this context, LMXSC-the subjective evaluation of one's standing of LMX among coworkers- provides valuable social comparison information, which, in turn, may shape employee's self-evaluation, especially self-efficacy (Greenberg et al., 2007; Hu & Liden, 2013). According to social comparison theory (Festinger, 1954), individuals can engage in either types of comparison; downward or upward comparison. Upward comparison refers to socially comparing with others who are considered to be better off and downward comparison refers to comparing with those who are thought to be worse off (Hu & Liden, 2013). Numerous researches have revealed the positive effects of engaging in downward comparison for individuals. For example, those engaging in downward comparison experience more positive feeling (Lyubomirsky & Ross, 1997) and self-confidence (Hakmiller, 1966). With acknowledging these features of social comparison, employees with high LMXSC are likely to experience downward comparison since, by definition, high LMXSC means they are better off at least in LMX relationships no matter how their actual abilities are. To be more specific, employees with high LMXSC may feel receiving more favorable attention and support from the



leader. This is quite important source to shape self-efficacy for two reasons. Self-efficacy gradually emerges from specific experiences of personal success (Bandura, 1982; Eden & Kinnar, 1991). Since the time and resources the leader exchanges with subordinates are limited rather than infinite, gaining more portion of distributed LMX can be interpreted by the beneficiary as more successful experience. Furthermore, supervisors' attention itself is regarded as possessing competence in work place. The situational information used to form higher LMXSC may as well be observed by other coworkers working in the same work spaces, given the context of sharing a single supervisor with multiple coworkers. Thus, the focal employee might feel in that they are highly valued person in organizational context so as to increase the feeling of self-efficacy. Some empirical findings provide both direct and indirect support for this reasoning. Liao et al. (2010) have found that social comparison cues generated from LMX differentiation weakened the effect of objective LMX on self-efficacy. More direct evidence of Hu and Liden (2013) found that RLMX (not perceived but calculated) is positively related to self-efficacy. In this study, Hu and Liden (2013) postulated that individuals are aware of all LMX information surrounding themselves to figure out own RLMX level, which can lead to discrepancy between real standing of LMX and information used for internal social comparison process. On the other hand, in this study, LMXSC, directly capture the result of internal social comparison process (Thomas et al., 2013) by asking employees of their own relative standings. Therefore, LMXSC likely to have more clear relationship with self-concepts (i.e. self-efficacy).

*Hypothesis 1. LMXSC is positively related to self-efficacy.*

## **Self-efficacy and job performance**

Self-efficacy refers to one's belief to successfully complete assigned task (Bandura, 1986). Once individuals perceive themselves to be potentially competent, they tend to have self-regulating motivation to act in a way to be competent in reality (Bandura, 1997, 2001). Self-regulating behaviors include putting more effort on tasks or not giving up in the face of challenging situations (Bandura, 1986). Also, self-efficacious people set higher goals from the outset (Liao et al., 2010). All these factors make individuals with high self-efficacy achieve better performance. Indeed, a meta-analytic review (Stajkovic & Luthans, 1998) reported that self-efficacy is strongly related to task performance ( $r = .34$ ). Also, individuals with high-self efficacy are also likely to engage in more discretionary behaviors to help organizational effectiveness (i.e. OCBs) (McAllister, Kamdar, Morrison, & Turban, 2007; Hu & Liden, 2013). Perceiving high self-efficacy likely increase the belief that they are capable of help others without diminishing the level of own task performance, thus increasing the frequency and level of citizenship behaviors (Hu & Liden, 2013). In addition, self-efficacy can also lead to better job performance via indirect ways such as job satisfaction. Self-efficacy is known to increase job satisfaction (Judge & Bono, 2001) because self-efficacious individuals are more likely to be optimists and have bright future of themselves (Bandura, 1986). As well-established, better job satisfaction promotes employees to increase various types of performance, including task performance and OCBs.

*Hypothesis 2a/b. Self-efficacy is positively related to (a) task performance and (b) OCBs.*

## **The Mediating role of Self-efficacy**

Prior studies on relative LMX (both RLMX and LMXSC) proved that individuals' LMX standings among coworkers have a positive influence on their task performance and OCBs (Henderson et al., 2008; Vidyarthi et al., 2010). Through what mechanism, does this perception of relatively higher LMX standing lead to positive workplace outcomes? Extant research implied that 'self-related evaluation' derived from social comparison serves as a basis for cognitive, emotional, and motivational processes, thus predicting work attitudes and behaviors (Buunk & Gibbons, 2007; Greenberg et al., 2007). Based on this view, we posit that high LMXSC encourage the perceiver's self-efficacy which result in better job performance (i.e. task performance and OCBs). LMXSC enhances the feeling of self-efficacy by signaling the focal employee's competency enough to deserve more attention from the leader. This feeling of confidence enables employees to set higher goals and promote them to stick to those challenging targets. Thus, integrating the assumption suggested for Hypotheses 1 and 2, we suggest that self-efficacy mediates the relationship between LMXSC and job performance. We posits a partial rather than a full mediating effects of self-efficacy. The rationale behind this is that LMXSC can be linked through job performance not only by enhancing one's psychological ability to perform better (self-efficacy), but also by triggering their feeling of indebtedness to reciprocate (felt obligation).

*Hypothesis 3a/b. Employee's self-efficacy mediates the positive relationship between LMXSC and (a) task performance, (b) OCBs.*

## 3.2. The Mediating Mechanism of Felt obligation

### LMXSC and felt obligation

Felt obligation refers to employee's belief that the one is personally responsible for serving the best interests of his/her employer (Eisenberger et al., 2001). Extending this concept, this study utilizes the concept of felt obligation *to supervisor* that has change the psychological target of reciprocating behaviors from organization to the direct leader. Felt obligation to organization was stronger for those who had better social exchange relationships with leader than those who had worse (Piccolo, Bardes, Mayer, & Judge, 2008). This is because high LMX is rather dependent on organizational support. Only when affluent resource and support from organizations are given to managers, they are able to establish better quality of LMX with subordinates (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). On the other hand, differentiation of LMX happens even when leader receive less supports from organizations and the distribution of own attention is totally up to leaders' decision. Therefore, when the employee perceive better standing in LMX with the supervisor, he or she likely feels felt obligation toward the supervisor rather than toward the organization. Therefore, this study focuses on employees' felt obligation to the leader.

Social exchange theory describes that social exchange, contrary to economic exchange, entails unspecified obligation of mutual reciprocity. The norm of reciprocity arises from a sense of obligation that causes the well-treated party to feel obligated to respond in other desirable ways (Gouldner, 1960). Based on these theory and underlying norm, LMX literature has consistently shown that employees with high-quality LMX

relationships have a tendency to reciprocate for their supervisors by showing better performance or engaging in discretionary behaviors (Ilies et al., 2007; Liden et al., 1997). Although the majority of LMX studies just ‘assumed’ felt obligation as a psychological mechanism through which higher LMX shapes employee’s attitudes and behaviors, Piccolo et al. (2008) actually tried to measure such psychological state and proved that LMX is positively related with felt-obligation (toward organization).

In a similar vein, employees who perceive higher LMXSC are likely to experience strong feeling of obligation to reciprocate. It should be noted that higher LMXSC does not guarantee the absolutely large amount of resources (information, psychological support, promotion opportunities or else) given to the focal employee as given through high objective LMX. LMXSC only signals employees that they are receiving more favorable treatment than their coworkers, no matter how much the absolute level of such treatment is. Still, this sense of relative standing in LMX is enough to trigger employee to feel obliged to the leader.

The norm of reciprocity suggests the receiver reciprocates as much favorably as he or she received. In that sense, social comparison process involves to enlarge or to downsize the perceived value of what is gained through exchange relationships. According to social comparison theory (Festinger, 1954), since resources from leaders are invisible and not readily measurable by objective tools, people tend to use social comparison to assess its value. Hence, those who perceive being provided with better treatment, while other employees are not, likely construe the given resource more unique and valuable. Accordingly, these employees may feel more obliged to return

commensurately with what leaders highly value. The earlier findings in various settings have shown that such subjective evaluation through social comparison brings strong motivational force to change individuals' attitudes and behaviors (Mussweiler, Rüter, & Epstude, 2004; Stapel & Blanton, 2004). Therefore, employees who have high LMXSC also likely have strong felt obligation to the supervisor than those have low LMXSC.

*Hypothesis 4. LMXSC is positively related to felt obligation.*

### **Felt obligation and job performance**

The relationship between felt obligation generated by LMXSC and job performance is fairly clear. In order to resolve the feeling of indebtedness, the recipient reciprocates with what the partner of exchange relationship (either organization or leader) highly values. Scholars have revealed various positive attitudes or behaviors employee use to do such reciprocation (Takeuchi et al., 2011) such as organizational commitment (Arshadi, 2011), constructive change (Liang et al., 2012), voice behaviors (Ng, Feldman, 2015), lessened withdrawal behaviors (Piccolo et al. 2008) and job performance. Among them, individuals are likely to increase the level of task performance and OCBs given its significance for their leader and organization. Supporting this reasoning, Wang et al. (2005) illustrated task performance as 'a form of currency' used in social exchanges between leader and follower. Additionally, Eisenberger et al. (2001) found that felt obligation was correlated not only with task performance but also with employee spontaneity, which is the similar concept with OCBs.

*Hypothesis 5. Felt obligation is positively related to (a) task performance and (b) OCBs.*

### **The Mediating role of felt obligation**

Wang et al. (2005) explained that when employees recognize more favorable treatment by the leader, it helps employees generate positive self-concepts and feel obliged to reciprocate, thus motivating desirable behaviors. Accordingly, we suggested that those with high LMXSC likely enhance job performance because they believe own capability. In addition to this instilling of psychological power, employees are also motivated to demonstrate desirable behaviors since they feel they have to. This assumption of two compatible underlying mechanisms is not new in explaining individuals' behaviors. Choi (2007) posited that a set of workplace traits (e.g. supportive leader) induces change-orientated OCBs via two constructs; psychological empowerment and felt responsibility.

The mediating role of felt obligation largely relies on the theory of social exchange theory and the norm of reciprocity. This simple and intuitive rule says 'when one person treats another well, the reciprocity norm obliges the return of favorable treatment' (Arshadi, 2011, p. 1103). Based on this theoretical background, numerous researches regarded felt obligation as an intervening factor that nested within social exchange relationships (e.g., Eisenberger et al., 2001). For example, Arshadi (2011) found that POS, the favorable social exchange between the organization and employee, invoked felt obligation and thus resulted in better in-role performance and lower turnover intention. Following theories and prior researches, we suggest that LMXSC provides employees with stronger drive to conduct reciprocal behaviors, which leads to better task performance and more OCBs.

*Hypothesis 6. Employee's felt obligation to supervisor mediates the positive relationship between LMXSC and (a) task performance, (b) OCBs.*

### **3.3. The moderating role of exchange ideology**

When employees perceive higher LMXSC, they tend to reciprocate for this favorable treatment in order to resolve the feeling of indebtedness (Gouldner, 1960). Of course, although such reciprocity is a human universal, this does not necessarily mean that every individual considers reciprocity to the same degree. Indeed, there has been strong evidence supporting the existence of individual differences (Rousseau & Schalk, 2000; Shore & Coyle-Shapiro, 2003). One such individual trait which is relevant with social exchange relationship is *exchange ideology*, which refers to ‘employee’s belief that it is appropriate and useful to base their concern with the organization’s welfare and their work effort on how favorably they have been treated by organization’ (Eisenberger et al., 2001, p. 43). In Eisenberger et al. (2001)’s research, exchange ideology moderated the positive relationship between POS and employee’s felt obligation. To be more specific, employees with strong exchange ideology experienced stronger feeling of reciprocity when they perceived favorable treatment from the organization. This finding implies that the consequence of social exchange relationships may be influenced by the degree to which the perceiver accepts the norm of reciprocity. Based on this earlier finding, this study applies the role of such individual difference (i.e. exchange ideology) to social exchange relationship between leaders and subordinates. Therefore, here exchange ideology (to leader) means one’s belief that work effort should be determined by how



much they are given from the leader.

Since most employees have exchange ideology to some degree (Eisenberger et al., 2001), high LMXSC likely have positive correlation with felt obligation. However, employees with stronger exchange ideology should experience higher level of felt obligation than those with lower exchange ideology. In the opposite direction, we may also expect that one with strong exchange ideology will experience more severely decreased level of felt obligation than weak exchange ideology individual experience when own relative standing of LMX is low.

*Hypothesis 7. The positive relationship between LMXSC and felt obligation will be stronger for the employees with strong exchange ideology than weak exchange ideology.*

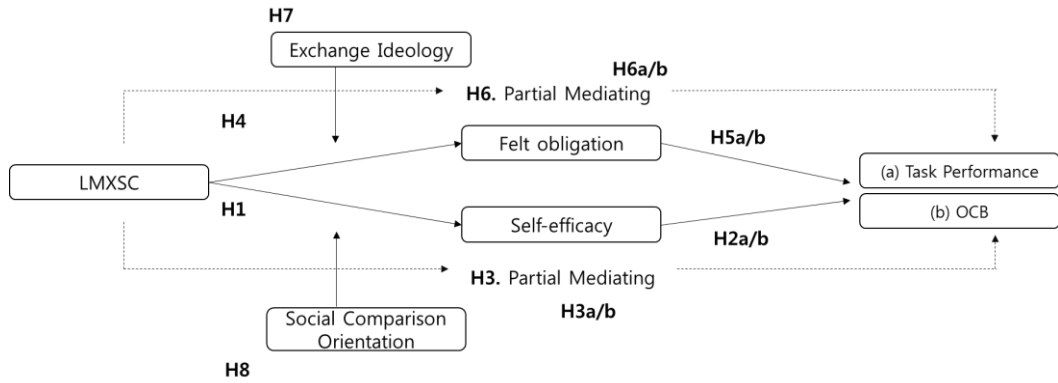
### **3.4. The moderating role of social comparison orientation**

The aforementioned relationship between LMXSC and self-efficacy explained that social comparison information strongly affects self-concepts even without consciousness (Stapel & Blanton, 2004; Bargh, 1989). However, it is noteworthy that not all individuals react to such social comparison to the same degree (Henderson et al., 2008). In this sense, many researches have shown interest on social comparison orientation as a possible moderator which may increase or reduce the effect of social comparison phenomenon on the individuals' psychological and behavioral outcomes. Social comparison orientation basically means the tendency to which individual search for information on self through comparisons with others (Darnon, Dompnier, Gilliéron, & Butera, 2010). Therefore, employees who have higher social comparison orientation are predisposed to pay more

attention to their given treatment from the leader. Since the social interaction with the shared leader is observed and shared with other coworkers in the same work place, these employees may feel that they deserve to gain more attention from the leader and experience enhanced self-efficacy. On the other hand, employees who have lower social comparison orientation, by definition, put less weight on social comparison information such as LMXSC. Accordingly, these people are less likely to feel enhanced self-efficacy even they are standing on relative high position in LMX among others.

*Hypothesis 8. The positive relationship between LMXSC and self-efficacy will be stronger for the employees with strong social comparison orientation than weak social comparison orientation.*

**Figure 1. Hypothesized Research Model.**



## IV. METHODS

### 4.1. Sample and Procedure

Data were collected using a survey method. Pairs of questionnaires were distributed to employees and their direct supervisors working in multiple firms in Republic of Korea. The employees answered for the variables including social exchange relationships, two mediators (i.e. felt obligation, self-efficacy) and two contextual moderators: exchange ideology, social comparison orientation. Their supervisors independently rated dependent variables: the focal employee's task performance and OCBs. This way of collecting data from two independent sources helps us to minimize common method bias which is common concern in organizational behavior studies (Podsakoff, Mackenzin, Lee, & Podsakoff, 2003). To maintain confidentiality and encourage honest response, the answered questionnaires were delivered to the researcher with sealed envelopes. In total, 200 pairs of questionnaires were distributed and 163 complete pairs were returned, giving a response rate of 81.5%. One sample was dropped before analysis due to its obvious incredibility.

The final sample of 162 supervisors had an average age of 40.41 ( $SD = 7.60$ ) and 73.3% were male. They had their present job for 118.63 months ( $SD = 104.73$ ). Regarding identical number of their employee samples, the average age was 31.05 ( $SD = 6.16$ ), and 57.8% were male. The average tenure of employee samples was 40.57 months ( $SD = 52.93$ ).

## 4.2. Measures

The measures are described below. Since all measures are originally developed in English, they are translated to Korean following the process recommended by Brislin (1980). All of variables were measured with a 7-point Likert scale (from 1 = strongly disagree to 7 = strongly agree).

***Social exchange relationships.*** LMX was assessed with the measure developed by Graen and Uhl-Bien (1995) in which the sample item says “My working relationship with my manager is effective.” This measure was found to be cross-culturally validate across western and non-western cultures (Liao et al., 2010; Schaubroeck & Lam, 2002). The focal interest of this study, LMXSC, was assessed using the measure developed by Vidyarthi et al. (2010). This measure consists of 6 items comparing one’s social relationship with that of others. The sample item of LMXSC says “I have a better relationship with my manager than most others in my work group.”

***Self-efficacy.*** Employees measured their own self-efficacy level with the measure developed by Chen, Gully and Eden (2001). This measure includes 8 items including the one saying "I will be able to successfully overcome many challenges."

***Felt Obligation.*** This study used the adapted version of the 6-item measure developed by Eisenberger et al. (2001) to measure felt obligation toward supervisor. Among the original items, the one saying "I owe it to the organization to do what I can to ensure that the organizations' customers are well-served and satisfied" was omitted since not all our respondents were in charge of customer-related job. Although original version was designed to tap the felt obligation toward organization, here we tap felt obligation

toward the supervisor by replacing the word ‘organization’ with ‘supervisor’. The sample item of felt obligation is: "I feel a personal obligation to do whatever I can to help my supervisor achieve his/her goals."

***Exchange Ideology.*** Eisenberger et al. (1986)'s 8-item scale was used to get a self-assessment of exchange ideology. A sample item reads "An employee should only work hard if his or her efforts will lead to a pay increase, promotion, or other benefits." Following Eisenberger et al. (1986), a higher score signals a stronger exchange ideology.

***Social Comparison Orientation.*** Social comparison orientation was measured through the shortened version of 11-item Iowa-Netherlands Comparison Orientation Measure (Gibbons & Buunk, 1999). Schneider and Schupp (2014) have shortened this original measure developing 6-item measure and provided statistical support of using it. A sample item says "I often compare how I am doing socially (e.g., social skills, popularity) with other people."

***Task performance.*** Supervisors evaluated employees' task performance. Task performance was tapped with the measure developed by Ashford, Lee, and Bobko (1989). Among various types of measures calibrating job performance level, this four item measure has advantage of questioning relative level of focal employee's performance level in comparison with others rather than asking the absolute quality of performance. This question may lessen possibility reckless positive evaluation of supervisor and help them consider more objectively. The sample item says "This employee performs better than many other employees who perform the same job."

***Organizational Citizenship Behaviors.*** To measure the level of employees' OCB, we adopted well-established measure of Lee and Allen (2002). Although this 16-item measure consists of two sub-dimensions according to the direction of benevolent behaviors; toward individuals (OCBI) and the organization (OCBO), we consider it as one overall dimension of OCB since the distinction of concrete OCBs is not our focal interest. We attained the level of employee OCBs by averaging all 16 items, one of which says "Willingly give your time to help others who have work-related problems."

***Control variables.*** Following prior literatures on job performance (e.g., Lang, Zettler, Ewen, Hulsheger, 2012), demographic variables such age, gender and education level were basically included as control variables. In addition, LMX was also controlled when testifying the hypotheses since LMX plays a role as the baseline of LMXSC judgment (Vidyarthi et al., 2010).

### **4.3. Analytical Strategy**

To identify our mediating mechanisms between LMXSC and job performance, this study adopt the mediation process introduced by Preacher and Hayes (2008). The majority of mediation study have been conducted based on the classical Baron and Kenny(1986)'s method, a rising number of scholars have started to use recently developed method of Preacher and Hayes with acknowledging the shortcomings of the old method (Hayes, 2009; Shrout & Boldger, 2002; see Zhao, Lynch, & Chen, 2010 for more details). Zhao et al. (2010) argued in a strong voice that the valuable and potential research model should not be abandoned just because they failed to satisfy all four

conservative conditions of Baron and Kenny method and recommended the adoption of mediation process of Preacher and Hayes. This assertion has gained supports by numerous scholars remarking more than 1600 citation, and actually many studies in major journals utilized new method of mediation process (e.g., Li et al., 2015, Srivastava, Bartol, & Locke, 2006). The development of SPSS process (Hayes, 2013) accelerated this change in methodology. According to Preacher and Hayes (2008), three conditions need to be satisfied to justify mediating effects (Li et al., 2015). First, the independent variable and the mediator should be significantly correlated. Second, the mediator must have significant influence on the dependent variable even after controlling the independent variable. Third, the indirect effect of the independent variable on dependent variable should be significant as well. First and second steps will be tested with hierarchical regression and the last step of identifying indirect effect will be conducted with the process of Hayes (2013). Furthermore, to identify moderating effects, the interaction terms of LMXSC  $\times$  exchange ideology and LMXSC  $\times$  social comparison orientation will be added in the relevant model. Since hierarchical regression cannot analyze multiple dependent variables at one time, the analysis will be conducted several times on mediators and final outcome variables.



## V . RESULTS

Descriptive statistics including means, standard deviations, and correlations among the variables are depicted in Table 1. Also, the figures of Cronbach's Alpha were reported in the same table and showed satisfying reliabilities across all variables ranging from .76 or higher.

Focal variables were mean-centered in advance to regression analysis to prevent the potential problem of multicollinearity (Cohen, Cohen, West, & Aiken, 2013). The results of regression analyses are described in Table 2 and 3. To verify that multicollinearity issue is not present, we examined the variance inflation factor (VIF) and the condition index (CI) of all variables, and all figures were well satisfying the established standards (i.e. VIF of less than 10; CI of less than 30) (Cohen et al., 2013).

According to Table 4 and 5, LMXSC had strong significant influence on self-efficacy ( $\beta = .19, p < .01$ ) and felt obligation ( $\beta = .19, p < .01$ ) even after LMX was included simultaneously, providing full support for Hypothesis 1 and 4. At the same time, self-efficacy was significantly related to both job performance; task performance ( $\beta = .19, p < .05$ ; see Table 2) and OCBs ( $\beta = .23, p < .001$ , see Table 3). Thus, Hypothesis 2a and 2b were supported. Felt obligation was only related to OCBs ( $\beta = .18, p < .05$ ), but not to task performance ( $\beta = .13, ns$ ). Therefore, Hypothesis 5b was only supported.

***The mediation effects.*** We tested the mediation hypotheses by checking three conditions to justify mediation effect proposed by the Preacher and Hayes (2008). The positive effects of LMXSC on self-efficacy ( $\beta = .19, p < .01$ ; Table 4) was significant,

satisfying the first condition of mediation. After LMXSC was controlled, self-efficacy was correlated with task performance ( $\beta = .16, p < .1$ ; Table 2) and citizenship behaviors ( $\beta = .17, p < .05$ ; Table 3). Thus, second condition was met. To identify the indirect effect of LMXSC on job performance, Hayes (2013)'s SPSS process was adopted. As a result, the indirect effect of LMXSC on task performance through self-efficacy was significant (95% CI = [.00, .09]). Also, the indirect effect of LMXSC on citizenship behaviors through self-efficacy was significant (95% CI = [.00, .10]). Zhao et al. (2010) articulated that Baron and Kenny's three test needs to be replaced with this simpler step of the bootstrap testing of the indirect effect. And they added, "We argue that to establish mediation, all that matters is that the indirect effect is significant." (Zhao et al., 2010, 204p.). In this sense, these results demonstrated the mediating role of self-efficacy between LMXSC and job performance, fully supporting Hypotheses 3a and 3b.

The same steps were repeated to verify the mediating effect of felt obligation between LMXSC and job performance. LMXSC and felt obligation was significantly correlated ( $\beta = .19, p < .01$ ; Table 5), thus satisfying the first condition. However, when LMXSC was included as controlled variable, the effects of felt obligation on task performance ( $\beta = .10, ns$ ) and citizenship behaviors ( $\beta = .12, ns$ ) were both insignificant. Therefore, the Hypotheses 6a and 6b were not supported.

In Table 5, the interaction term of LMXSC and exchange ideology was additionally entered to test the moderating effect. However, the proposed moderating effect of exchange ideology between LMXSC and felt obligation was not significant ( $\beta = .02, ns$ ), failing to provide support for Hypothesis 7. On the while, the interaction of

LMXSC and SCO in Table 4 was marginally significant. This result renders moderate support for Hypothesis 8. To interpret this interaction result, we plotted the graph by calculating the predicted high and low representative values of the moderator (one standard deviation above and below the average) following Aiken and West (1991). As shown in Figure 1, the effect of LMXSC on self-efficacy was stronger for the employees who have high social comparison orientation. Thus, the directions of plots are in line with the prediction of Hypothesis 8.

**Table 1. Descriptive Statistics and Correlations among Variables**

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Age	31.05	6.16											
2. Gender	1.42	.50	-.11										
3. Education	2.98	.66	.24**	-.03									
4. LMX	5.11	1.01	.18*	-.20**	.03	(.90)							
5. LMXSC	4.59	1.17	.12	-.12	.06	.59**	(.92)						
6. Self-efficacy	5.39	.93	.20*	-.14	.09	.45**	.42**	(.95)					
7. Felt obligation	4.57	.92	.12	-.15	.07	.49**	.45**	.42**	(.76)				
8. Exchange Ideology	3.66	1.04	-.14	.04	.07	-.25**	-.08	-.30**	-.33**	(.87)			
9. SCO	4.39	.91	-.12	.05	.08	.04	.10	.14	.17*	.18*	(.76)		
10. TP	5.59	.98	-.05	-.04	.10	.38**	.34**	.31**	.29**	-.14	.15	(.94)	
11. OCBs	5.32	.85	.00	-.14	.06	.37**	.44**	.34**	.33**	-.15	.18*	.66**	(.94)

*Note.* N's range from 160 to 162 due to occasional missing data. Reliabilities are on the diagonal in parentheses. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison. SCO = Social comparison orientation. OCBs = Organizational citizenship behaviors.

\*  $p < .05$ . \*\*  $p < .01$ .

**Table 2. Multiple Regression Results for Task Performance**

Variable	Task Performance					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	-.15*	-.16*	-.17*	-.17*	-.16*	-.16*
Gender	.03	.03	.04	.04	.04	.04
Education	.13	.12	.12	.11	.12	.11
LMX	.41***	.31**	.33***	.27**	.35***	.28**
<u>Main effects</u>						
LMXSC		.17+		.13		.15
Self-efficacy			.18*	.15+		
Felt obligation					.12	.09
Overall F	8.10***	7.28***	7.61***	6.72***	6.97***	6.27***
$R^2$	.17	.19	.20	.21	.19	.20
$\Delta F$		3.47+	4.82*	3.36+	2.19	1.19
$\Delta R^2$		.02	.03	.02	.01	.01

*Note.* N = 159. All variables were centered at their means. Figures indicate standardized regression coefficients. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison.

+ $p < .1$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 3. Multiple Regression Results for OCBs**

Variable	Organizational Citizenship Behaviors					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	-.08	-.09	-.11	-.10	-.09	-.09
Gender	-.09	-.09	-.08	-.08	-.08	-.08
Education	.06	.05	.05	.04	.06	.05
LMX	.37***	.17+	.27**	.12	.28**	.13
<u>Main effects</u>						
LMXSC		.33***		.28**		.30**
Self-efficacy			.24**	.18*		
Felt obligation					.19*	.13
Overall <i>F</i>	6.95***	8.76***	7.60***	8.36***	6.70***	7.73***
<i>R</i> <sup>2</sup>	.15	.22	.20	.25	.18	.20
$\Delta F$		13.71***	8.82**	5.18*	4.99*	1.19
$\Delta R^2$		.07	.05	.03	.03	.01

*Note.* N = 159. All variables were centered at their means. Figures indicate standardized regression coefficients. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison.

+ $p < .1$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 4. Multiple Regression Results for Self-efficacy**

Variable	Self-efficacy			
	Model 1	Model 2	Model 3	Model 4
Age	.10	.10	.11	.12
Gender	-.03	-.03	-.03	-.03
Education	.05	.04	.02	.02
LMX	.42***	.27**	.28**	.28**
<u>Main effects</u>				
LMXSC		.25**	.23**	.25**
SCO			.11	.08
<u>Moderation</u>				
LMXSC * SCO				.13+
Overall <i>F</i>	10.04***	10.00***	8.73***	8.02***
<i>R</i> <sup>2</sup>	.21	.25	.26	.27
$\Delta F$		7.99**	2.43	3.01+
$\Delta R^2$		.04	.01	.02

*Note.* N = 159. All variables were centered at their means. Figures indicate standardized regression coefficients. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison. SCO = social comparison orientation.

+ $p < .1$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 5. Multiple Regression Results for Felt obligation**

Variable	Felt obligation			
	Model 1	Model 2	Model 3	Model 4
Age	.01	.01	-.03	-.03
Gender	-.06	-.06	-.06	-.06
Education	.05	.04	.07	.07
LMX	.46***	.32***	.23**	.23**
<u>Main effects</u>				
LMXSC		.25**	.28**	.29**
EXID			-.27***	-.27***
<u>Moderation</u>				
LMXSC * EXID				.03
Overall <i>F</i>	11.82***	11.60***	13.02***	11.14***
<i>R</i> <sup>2</sup>	.24	.28	.34	.34
$\Delta F$		8.46**	14.87***	.22
$\Delta R^2$		.04	.07	.00

*Note.* N = 159. All variables were centered at their means. Figures indicate standardized regression coefficients. Gender (1=male, 2=female). LMX = leader-member exchange. LMXSC = leader-member exchange social comparison. EXID = Exchange Ideology.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.



**Figure 2. The Interaction Effects of LMXSC and Social Comparison Orientation**



*Note.* SCO = Social Comparison Orientation.

**Table 6. The Summary of Hypothesis Testing**

	Hypothesis	Result
H1	LMXSC is positively related to self-efficacy.	<i>Supported</i>
H2a	Self-efficacy is positively related to (a) task performance.	<i>Supported</i>
H2b	Self-efficacy is positively related to (b) OCBs.	<i>Supported</i>
H3a	Employee's self-efficacy mediates the positive relationship between LMXSC and task performance.	<i>Supported</i>
H3b	Employee's self-efficacy mediates the positive relationship between LMXSC and OCBs.	<i>Supported</i>
H4	LMXSC is positively related to felt obligation.	<i>Supported</i>
H5a	Felt obligation is positively related to (a) task performance.	<i>Unsupported</i>
H5b	Felt obligation is positively related to (b) OCBs.	<i>Supported</i>
H6a	Employee's felt obligation to supervisor mediates the positive relationship between LMXSC and (a) task performance.	<i>Unsupported</i>
H6b	Employee's felt obligation to supervisor mediates the positive relationship between LMXSC and (b) OCBs.	<i>Unsupported</i>
H7	The positive relationship between LMXSC and felt obligation will be stronger for the employees with strong exchange ideology than weak exchange ideology.	<i>Unsupported</i>
H8	The positive relationship between LMXSC and self-efficacy will be stronger for the employees with strong social comparison orientation than weak social comparison orientation.	<i>Supported</i>

## VI. DISCUSSION

A countless number of studies have contributed to broaden our knowledge on LMX (Graen & Uhl-Bien, 1995; Gestner & Day, 1997, Ilies et al., 2007). However, only a handful of researches have focused on LMX in social context. Thus, to put more weight on the research stream investigating relative LMX in social environment, this study was initiated to discover *how* and *when* the perception of relatively high LMX affects individuals' job performance. In a broad sense, our empirical findings supported the general presumption that LMXSC has a significant and positive effect on psychological and behavioral outcomes beyond the effect of LMX supporting the former study (Vidyarthi et al., 2010). However, one needs to be cautious when interpreting the results in that LMX still had substantial explanatory power in most cases, while LMXSC played significant role depending on variables.

### 6.1. The Summary of Hypotheses Testing

Drawing on social exchange (Blau, 1964) and social comparison theory (Festinger, 1954), we assumed that LMXSC may positively affect the follower's felt obligation and self-efficacy. Indeed, our findings supported that one with high LMXSC is more likely to feel obliged to reciprocate for the supervisor and to have positive expectation on the self than the one with low LMXSC. Objective LMX had still independent effect on both mediators, however, the effect of LMX was

reduced when LMXSC was considered. This result is in consonance with Vidyarthi et al. (2010)'s prediction that LMX plays as a base line for the additional effect of LMXSC.

Also, self-efficacy had strong and significant effects on both types of job performance; task performance and OCBs. This is meaningful in that although self-efficacy is the result of self-evaluation and job performance was evaluated by totally independent evaluator (i.e. supervisor), the one with high self-efficacy showed obviously higher level of in-and extra-role performance behavior. That is, the belief that they will be successful in fulfilling duties and responsibilities (Gardner & Pierce, 1998) has indeed been realized into behavioral outcomes. On other hand, felt obligation was not related with task performance, but only with OCBs. However, this unexpected result accompanies with possible explanation. According to the result, even the employee feels that they 'have to' pay back with better task performance, for several reasons this motivation could not be changed into behavioral outcome which can be observed by the supervisor. First reason is that the obliged employee might lack of confidence or work-related ability to achieve higher task performance. In that case, the employee likely to choose the other option to reciprocate (i.e. OCBs) since citizenship behaviors does not require any skills and knowledge. Second, the environmental factors may hinder the employee's task performing. For example, due to the low job autonomy, the employee may not try better work procedure even though he or she wants to. Also, in this case, the employee is likely to increase citizenship behaviors because it

allows wider discretion in action.

The one major purpose of this study was to investigate two coexisting mechanisms through which the perception of relative high LMX with supervisor affects focal employees' job performance. As predicted, self-efficacy partially mediated the relationship between LMXSC and two types of job performance. However, felt obligation was failed to predict job performance level when other main factors are considered together. This finding provides an interesting implication that the one who feels closer to the leader will show better performance mainly because he or she believes own competency at work rather than because the one feel the necessity of reciprocation.

The other purpose of this study was to find individuals factors that might moderate the relationship between LMXSC and two mediators. The assumed moderating role of exchange ideology between LMXSC and felt obligation was not supported. Although it was marginal, the significant moderating role of social comparison orientation between LMXSC and self-efficacy was observed. Supporting our assumption, the employee with high social comparison orientation reacted to LMXSC with higher level of job performance than those with low social comparison. Since self-enhancing effect of social comparison information was identified again, it will be a valuable extension to find organizational and individual factors that might enhance this effect. For example, the individuals with inherently have negative view on self (e.g., high neuroticism) may take more benefits from perceiving relatively higher standing in LMX.

## 6.2. Theoretical Implications

Our findings provide some valuable theoretical implications. First of all, this study showed the empirical support for the validity of LMXSC as meaningful variable distinct from LMX, contributing to emerging literature on LMX differentiation (Henderson et al., 2009; Hu & Liden, 2013). This is meaningful step forward given that the majority of existing LMX literature has almost neglected the effect of LMX embedded in social context (Henderson et al., 2008). In line with Vidyarthi et al. (2010)'s findings, our study successfully captured employee's subjective perception of standing of LMX within social context and its effects on behavioral outcomes. Especially, our findings demonstrated that when individuals recognize their relatively high standings in distribution of LMX, they likely to show more citizenship behaviors than when they only recognize absolutely high level of LMX. Erdogan and Bauer (2015) in their review said "perhaps the most promising of the new measures of LMX is the LMXSC, which has been shown to explain variance in outcomes beyond LMX per se." These scholars also admit the silent effect of LMX as observed in our study. However, despite this, it is indisputable that social comparison approach in LMX literature will play a pivotal role in the future.

Second, we answered the call for examining underlying mechanisms between relative LMX and outcome variables (Hu & Liden, 2013, Vidyarthi, 2010) by investigating the psychological mediators. It deserves mention that, between

two mediating processes, LMXSC has been found to be more strongly related to self-efficacy than felt obligation. This finding gets well along with earlier theory and studies on social comparison phenomenon. Hu and Liden (2013) predicted that comparing oneself with worth-off others may help form a positive self-concepts. And Lyubomirsky and Ross (1997) referred this 'hedonic' consequence of social comparison. Lastly, we assumed dual mediating role of felt obligation and self-efficacy. On the while, the mediating effect of felt obligation was statistically less evident compared to self-efficacy. This implies that incorporating psychological factors regarding another important target of which employees concern, organization, would be valuable exploration. For example, Henderson et al. (2008) posited that psychological contract fulfilment with organization mediates the effect of RLMX on in- and extra-role performance. Likewise, high LMXSC may lead to behavioral outcomes, through employees' positive attitude towards organization such as organizational commitment.

Third, we shed light on the moderating factors which may shape the effect of LMXSC on employees' psychological states. The results of investigation of exchange ideology and social comparison orientation contributes to some extant for each literature. Unlike our expectation, the hypothesized moderating role of exchange ideology between LMXSC and felt obligation was not supported in this study. Originally, Eisenberger et al. (1986, 2001) devised the concept of exchange ideology to demonstrate individual differences degree to which how sensitively they response to reciprocity rules. In this sense, exchange ideology is supposed to

be related to negative attitudes or behaviors only when high exchange ideology individual experiences negative treatment in social exchanges such as LMX and exchange ideology itself need not be related to either positive or negative consequences. However, in our empirical analysis, exchange ideology was directly and significantly related to low felt obligation and, as well, low level of both job performance regardless of how well they are treated from the leader (see Table 1). This result implies that individuals who scored high in exchange ideology measure are likely to be just 'selfish' ones who take their own and give back less, rather than to be more sensitive people toward the norm reciprocity. In this line, Takeuchi et al. (2011) also reported the negative main effect of exchange ideology on felt obligation toward the organization which ends in lower task performance. These empirical findings imply that exchange ideology has changed to be a negatively framed variable being far from original intention to tap the sensitivity level. Therefore, unlike our expectation, exchange ideology seemed to have strong main effect rather than to be a moderator. We recommend future researchers to use the measure such as equity sensitivity (Miles, Hatfield, & Huseman, 1989) to successfully tap the individual differences in reacting to subject perception of relative LMX standings.

On the other hand, we could find the moderating effect of social comparison orientation. As expected, high social comparison orientation basically has shown the tendency to response intensely toward social comparison information from LMXSC. Therefore, it has been clear that there exist individual



differences in the extent to which people accept and utilize such information. Furthermore, prior studies mostly focused on enhancing effect of social comparison effect on the negative outcomes such as antisocial behaviors (Thau et al., 2007) or feeling of contempt (Tse et al., 2013). On the other hand, our result has found that social comparison orientation may have boosting effect on positive social cue and psychological outcomes.

### **6.3. Practical Implications**

Our finding provides some useful implications for leaders. Researches in LMX differentiation suggested negative effect on teams at group level because unequal distribution of resources and attention may cause the feeling of injustice or jealousy (Hooper & Martin, 2008; Tse et al., 2013). On the contrary, our finding has shown that the differentiated standing of LMX may have positive influence on members at individual level through enhancing the perceiver's self-efficacy. Therefore, it is tough but essential task for leaders to exactly recognize effects of differentiation at both group and individual level. Huang, Shi, Xie, and Wang (2015) illustrated the double-edged sword effect of differentiation that, while higher LMXSC can lead to positive consequence, lower LMXSC might trigger retaliation. However, given that each members in organization plays varying roles, it is inevitable for leaders to form differentiated relationships with members (Liden, Erdogan, Wayne, & Sparrowe, 2006). As Kristof-Brown et al. (2005) asserted, of

importance is how the employees perceive the situation rather than their actual position in LMX. Therefore, identical situation for the leader is that making each members believe that they possess high LMXSC. For example, this can be achieved by the leader if he or she frequently show personal consideration for the target member with not being noticed by other members. Furthermore, this study suggests that a certain type of employees may get more benefits from perceiving better LMXSC. Skillful managers may adopt this idea by giving more considerate attention the followers who seems to lack of task-related confidence and proactive attitudes since the boost up effect of LMXSC on self-efficacy may work more strongly for these followers.

## **6.4. Limitations and Directions for Future Research**

The great advantage of the research method used in this study is that we collected the data from two independent sources: the leader and the follower. Although this method lessened the possibility of critical common method bias, we measured independent and mediating variables from the same survey. This may cause confusion in interpreting the causal directions among research variables. For example, highly self-efficacious individual can more likely to perceive or form better LMXSC. Therefore, future study needs to consider a longitudinal research design to further identify the causal relationship.

Some may concern the high correlation between LMX and LMXSC. Many issues in the behavioral science are inaccessible in intact experiments and can only be observed as they occur in nature. In nature, factors that affect the dependent factor Y are generally correlated (Cohen, Cohen, West & Aiken, 2013). It is inevitable phenomenon considering the definition of both constructs. The measure of LMXSC taps positive evaluation of one's standing in LMX and thus contains the phrases of downward comparison in its items. Accordingly, if basically LMX is not high, such downward comparison with others may not occur. For this reason, high correlation was observed in prior LMXSC studies as well ( $r=.55$  in Vidyarthi et al., 2010). However, it does not entirely negate the validity of LMXSC study because, from the outset, LMXSC was introduced to explain unveiled part of LMX literature, not to replace it. Vidyarthi et al also admitted the influence of LMX and thus called future studies to find situational and individuals' traits when LMXSC takes larger explanatory power from LMX. Furthermore, the interest of scholars on LMXSC is emerging very recently. Few studies in proceeding will be published in a couple of years, still the number of published articles are very small, causing difficulties for us to deal with some methodology and statistical issues. For example, due to significant semantic and statistical relationship between LMX and LMXSC, Vidyarthi et al., posited partial role of LMXSC. On the other hand, recently peer-reviewed work of Huang et al. (2015) did not considered or contained LMX in their model while identifying the effects of LMXSC on organizational deviance. This study, compared to Huang et al. (2015), takes more conservative approach by

unveiling the effect of LMXSC after controlling the effect of LMX, which may relieve the concern of high correlation issues. However, far more empirical evidence needs to be accumulated to establish the boundary and relationship between LMX and LMXSC.

Future research in LMXSC literature is also required to find potential moderators between LMXSC and two mediators. Many a scholars agree on the idea that certain types of employees may respond more or less favorably to differentiation in LMX (Henderson et al., 2008). In this line, investigating moderating of well-established individual differences such as Big 5 traits or goal orientation will be interesting way.

Lastly, we assumed dual mediating role of felt obligation and self-efficacy. This reflects our speculation that the perception of high LMXSC may affect employee's psychological states toward the supervisor (felt obligation) and oneself (self-efficacy). Although the hypotheses were moderately supported, mediating effect of felt obligation was statistically less evident compared to self-efficacy. This implies that incorporating psychological factors regarding another important target of which employees concern, *organization*, would be valuable exploration. For example, Henderson et al. (2008) posited that psychological contract fulfilment with organization mediates the effect of RLMX on in- and extra-role performance. Likewise, high LMXSC may lead to behavioral outcomes, through employees' positive attitude towards organization such as organizational commitment.

## **6.5. Conclusion**

Among the series of new approaches in LMX after the millennium (Henderson et al., 2008; Hooper & Martin, 2008), Erdogan and Bauer (2015) pinpointed LMXSC as the most promising area. Since for most individuals, perceived standings seems to be more significant than just absolute taking of desired resources and attention from leader (Erdogan & Bauer, 2015). Although not all hypotheses were supported, this study provided some insightful findings on the role and effect of LMXSC accompanying with the empirical evidence. Social comparison is the inherent nature of human beings and we all are exposed to it during the long day of working with others. Therefore, based on this study and forthcoming studies, we hope social comparison phenomenon get into the boundary of organizational behavior researches.

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## APPENDIX

### <Employee-rated Questionnaire>

*LMX* (see Graen & Uhl-Bien, 1995)

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1. Do you know where you stand with your leader. . do you usually know how satisfied your leader is with what you do?
  2. How well does your leader understand your job problems and needs?
  3. How well does your leader recognize your potential?
  4. What are the chances that your leader would use his/her power to help you solve problems in your work?
  5. What are the chances that he/she would "bail you out," at his/her expense?
  6. I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so
  7. How would you characterize your working relationship with your leader?
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*LMXSC* (see Vidyarthi, Anand, Liden, Erdogan & Ghosh, 2010)

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1. I have a better relationship with my manager than most others in my work group
  2. When my manager cannot make it to an important meeting, it is likely that s/he will ask me to fill in
  3. Relative to the others in my work group, I receive more support from my manager
  4. The working relationship I have with my manager is more effective than the relationships most members of my group have with my manager
  5. My manager is more loyal to me compared to my coworkers
  6. My manager enjoys my company more than he/she enjoys the company of other group members
-

*Self-efficacy* (see Chen, Gully, Eden, 2001)

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1. I will be able to achieve most of the goals that I have set for myself.
  2. When facing difficult tasks, I am certain that I will accomplish them.
  3. In general, I think that I can obtain outcomes that are important to me.
  4. I believe I can succeed at most any endeavor to which I set my mind.
  5. I will be able to successfully overcome many challenges.
  6. I am confident that I can perform effectively on many different tasks.
  7. Compared to other people, I can do most tasks very well.
  8. Even when things are tough, I can perform quite well.
- 

*Felt obligation* (see Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001)

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1. I feel a personal obligation to do whatever I can to help the ~ achieve its goals.
  2. I owe it to the ~ to give 100% of my energy to ~'s goals while I am at work.
  3. I have an obligation to the ~ to ensure that I produce high-quality work.
  4. I owe it to the ~ to do what I can to ensure that ~ customers are well-served and satisfied.
  5. I would feel an obligation to take time from my personal schedule to help the ~ if it needed my help.
  6. I would feel guilty if I did not meet the ~'s performance standards.
  7. I feel that the only obligation I have to the ~ is to fulfill the minimum requirements of my job (reversed)
-

*Exchange Ideology* (see Eisenberger, Armeli, Rexwinkel, Lynch & Rhoades, 2001)

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1. Employees should not care about the organization that employs them unless that organization shows that it cares about its employee
  2. An employee who is treated badly by a company should work less hard
  3. An employee should only go out of their way to help their organization if it goes out of its way to help them
  4. An employee's work effort should depend partly on how well the organization deals with his or her desires and concerns
  5. An employee should only work hard if his or her efforts will lead to a pay increase, promotion, or other benefits
  6. Even if an organization does not appreciate an employee's efforts, the employee should still work as hard as he or she can. (reversed)
  7. An employee should work as hard as possible no matter what the organization thinks of his or her efforts. (reversed)
  8. An employee's work effort should not depend on the fairness of his or her pay. (reversed)
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*Social Comparison Orientation* (see Schneider & Schupp, 2014)

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1. I always pay a lot of attention to how I do things compared with how others do things
  2. I often compare how I am doing socially (e.g., social skills, popularity) with other people
  3. I am not the type of person who compares often with others. (reversed)
  4. I often try to find out what others think who face similar problems as I face.
  5. I always like to know what others in a similar situation would do.
- If I want to learn more about something, I try to find out what others think about it
-

### <Supervisor-rated Questionnaire>

*Task Performance* (see Ashford, Lee, & Bobko, 1989)

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1. The performance level of this employee is satisfactory,
  2. This employee is effective in his or her job
  3. This employee performs better than many other employees who perform the same job
  4. This employee produces high-quality work
- 

*Organizational Citizenship Behaviors* (see Lee & Allen, 2002)

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1. Help others who have been absent.
  2. Willingly give your time to help others who have work-related problems.
  3. Adjust your work schedule to accommodate other employees' requests for time off.
  4. Go out of the way to make newer employees feel welcome in the work group.
  5. Show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.
  6. Give up time to help others who have work or non-work problems.
  7. Assist others with their duties.
  8. Share personal property with others to help their work.
  9. Attend functions that are not required but that help the organizational image.
  10. Keep up with developments in the organization.
  11. Defend the organization when other employees criticize it.
  12. Show pride when representing the organization in public.
  13. Offer ideas to improve the functioning of the organization.
  14. Express loyalty toward the organization.
  15. Take action to protect the organization from potential problems.
  16. Demonstrate concern about the image of the organization.
-

## 국 문 초 록

# 상대적 LMX의 질(LMXSC)이 구성원의 직무성과 에 미치는 영향과 메커니즘에 관한 연구

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주변 사람들과의 사회적 비교를 통하여 자신의 지위와 정체성을 찾아가는 것은 인간이 사회생활을 영위함에 있어서 발생하는 필연적인 현상이다. 이러한 사실에도 불구하고, 기존의 상사와 구성원간 교환관계(Leader-member exchange, 이하 LMX) 문헌에서는 한 명의 상사가 동시에 여러 구성원들과 사회적 교환관계를 형성함으로써 인해 발생하는 구성원들간 사회적 비교 현상과 그 효과에 대한 연구는 거의 이루어지지 않았다. 이러한 이론적 공백을 메꾸고, 상사와 부하간 관계에 대한 보다 현실적이고 온전한 이해를 위하여, 본 연구에서는 사회적 비교를 통해 인식한 ‘상대적 LMX의 질’(Leader-member exchange social comparison, 이하 LMXSC)이 구성원에게 미치는 효과와 그 메커니즘에 대하여 연구한다. 근래에 소개된 개념인 LMXSC는 자신과 상사와의 관계의 질이 동료들의 그것들과 비교하여 어느 정도 우호적인지 대한 인식을 측정하고, 그 효과를 확인하는 것을 목적으로 한다. 사회적 비교 현상에 관한 고전이론과 다수의 실증연구들은 이처럼 사회적 비교를



통하여 인식된 LMX가 단순히 상사와 부하 사이의 절대적 LMX의 효과 이상으로 구성원들의 태도와 행동에 영향을 줄 것으로 예측한다. 특히, 본 연구에서는 다른 구성원들보다 높은 수준의 상대적 LMX의 질을 인식한 구성원은 상사에 대한 보답의 의무감을 느끼고, 더 높은 자존감을 경험하며, 결과적으로 이 두 심리적 요인은 향상된 수준의 직무성과와 조직시민행동으로 이어질 것으로 예상된다. 더불어, 선행연구들은 사회적 교환 관계와 사회적 비교에 반응하는 정도에 개인차가 존재함을 밝힌 바 있다. 따라서, 본 연구에서는 LMXSC의 효과가 두 가지 개인적 요인- 교환 이데올로기와 사회적 비교성향-에 의하여 조절되는지 여부를 탐색한다.

본 연구는 국내의 다양한 산업에 종사하는 163개의 상사-구성원 쌍을 대상으로 한 설문조사 결과를 통하여, 앞서 가정한 가설들을 실증적으로 분석 및 검증하였다. 이 데이터를 바탕으로 한 위계적 회귀분석 결과에 따르면, LMXSC는 LMX의 효과를 통제한 이후에도 구성원이 느끼는 상사에 대한 의무감과 자존감에 유의미하게 긍정적인 영향을 미치는 것으로 밝혀졌다. 구성원들의 자존감은 다시 상사가 평가한 직무성과와 조직시민행동 수준을 높이는 것으로 나타났으며, 상사에 대한 의무감은 조직시민행동과만 유의미한 상관관계를 나타내었다. 매개 메커니즘에 대한 분석 결과는 LMXSC가 직무성과와 조직시민행동에 미치는 효과가 구성원의 자존감에 의하여 부분매개됨을 나타내었다. 기대한 바와 달리 상사에 대한 의무감의 매개효과는 지지되지 않았다. 마지막으로, 사회적 비교 성향이 강한 구성원들에게 LMXSC가 자존감에 미치는 영향이 더 큰 것으로 밝혀졌으며, LMXSC와 상사에 대한 의무감 사이의 교환 이데올로기의 조절효과는 확인되지 않았다.

본 연구는 기존의 상사-구성원 양자간 접근법에서 나아가 사회적

시각에서 LMX를 연구하였다는 점에서 중요한 의의를 지닌다. 특히, 본 연구는 LMXSC가 LMX의 영향을 넘어서 구성원들의 직무성과를 향상시키는 효과와 메커니즘에 대한 실증적 증거를 제공해주었다. 이러한 발견은 즉, 남들보다 더 좋은 상사와의 관계를 인식하는 것은 단순히 상사와 우호적인 관계를 형성하는 것 이상의 긍정적인 효과를 가져올 수 있다는 점을 시사한다. 또한, 구성원의 개인적 특성에 따라 LMXSC의 효과가 달라질 수 있다는 연구결과는 다양한 유형의 휘하 구성원들을 다루어야 하는 관리자들에게 실무적인 시사점을 제공할 것이다. 따라서, 연구자는 본 연구를 통하여 더 많은 연구자들이 이러한 상대적 LMX의 인식과 효과에 대하여 관심을 갖고 연구함으로써 국내외에서 사회적 맥락에서의 LMX 연구의 저변이 확대되기를 기대한다. 연구의 결과에 대한 학술적, 실무적 시사점과 연구의 한계, 그리고 향후 연구에 대한 제언이 함께 논의된다.

**주요어:** 상대적 LMX의 질(LMXSC), 사회적 비교, 자존감, 의무감,  
사회적 비교 성향, 직무성과

**학번:** 2014-20450